XR-C650RDS

SERVICE MANUAL

AEP Model
UK Model

Model Name Using Similar Mechanism	XR-C750RDS/C850RDS
Tape Transport Mechanism Type	MG-52B-135

SPECIFICATIONS

Cassette player section

Tape track 4-track 2-channel stereo
Wow and flutter 0.08% (WRMS)
Frequency response 30 - 20,000 Hz
Signal-to-noise ratio

Cassette type	Dolby B NR	Dolby NR off
TYPE II, III, IV	67 dB	61 dB
TYPE I	64 dB	58 dB

Tuner section

FM

Tuning range 87.5 - 108.0 MHz
Aerial terminal External aerial connector
Intermediate frequency 10.7 MHz
Usable sensitivity 8 dBf
Selectivity 75 dB at 400 kHz
Signal-to-noise ratio 65 dB (stereo),
68 dB (mono)
Harmonic distortion at 1 kHz
0.5% (stereo),
0.3% (mono)
Separation 35 dB at 1 kHz
Frequency response 30 - 15,000 Hz
Capture ratio 2 dB

MW/LW

Tuning range MW : 531 - 1,602 kHz
LW : 153 - 281 kHz
Aerial terminal External aerial connector
Intermediate frequency 10.71 MHz/450 kHz
Sensitivity MW : 30 µV
LW : 50 µV

Power amplifier section

Outputs Speaker outputs
(sure seal connectors)
Speaker impedance 4 - 8 ohms
Maximum power output 40 W × 4 (at 4 ohms)

– Continued on next page –

FM/MW/LW CASSETTE CAR STEREO

MICROFILM

SONY®

General

Outputs	Line outputs (2) Power aerial relay control lead Power amplifier control lead
Tone controls	Bass ± 8 dB at 100 Hz Treble ± 8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 184 × 50 × 176 mm (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 163 mm (w/h/d)
Mass	Approx. 1.3 kg
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1) Rotary remote RM-X2S (1)

Design and specifications are subject to change without notice.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

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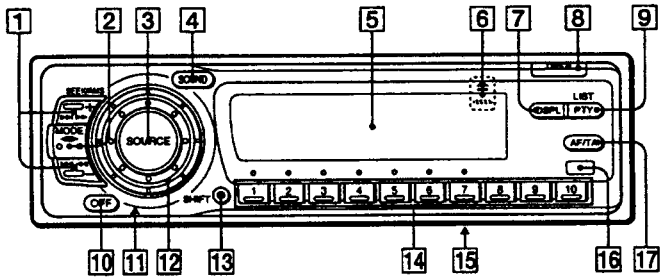
Location of controls



EN

Refer to the pages for details.

1 SEEK/AMS (seek/Automatic Music Sensor/manual search) button 5, 6, 7, 8, 9, 11, 15, 16, 17, 19

2 MODE (band select, changer select, tape transport direction) button 5, 7, 14, 16, 18

3 SOURCE (source select) button 5, 7, 14, 16, 18

4 SOUND button 13

5 Display window

6 ⏏ (eject) button (located on the front of the unit hidden by the front panel) 5

7 DSPL button (display mode change) button 6, 8, 14, 15, 18, 19

8 OPEN button 4, 5, 21

9 PTY/LIST button
PTY 11
Disc Memo 18
List-up 19

10 OFF button 4, 5

11 Reset button (located on the front of the unit hidden by the front panel) 4

12 Dial (volume/bass/treble/balance/fader control) 5, 18

13 SHIFT button
BTM 7, 10
SET UP 5, 12, 14
PLAY MODE 6, 7, 8, 9, 10, 15, 16, 17, 19

14 During radio reception:
Preset number buttons 7
During CD/MD playback:
Direct disc selection buttons 15

15 POWER SELECT switch (located on the bottom of the unit)
See "POWER SELECT switch" in the Installation/Connections manual.

16 Receptor for wireless remote

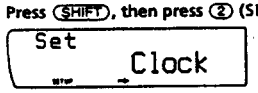
17 AF/TA button 9, 10

Setting the clock

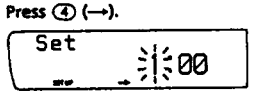
The clock has a 24-hour digital indication.

Example: Set the clock to 10:08

1 Press (SHIFT), then press ② (SET UP).



❶ Press ④ (→).



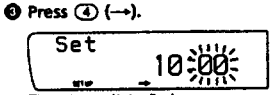
The hour digit flashes.

❷ Set the hour.

to go backward

to go forward

❸ Press ④ (→).

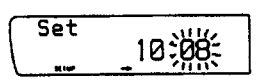


The minute digits flash.

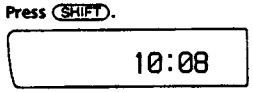
❹ Set the minute.

to go backward

to go forward



2 Press (SHIFT).



The clock starts.

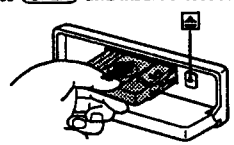
Note

If the POWER SELECT switch on the bottom of the unit is set to the ❶ position, turn the power on first, then set the clock. To turn the power on, press (SOURCE).

Cassette Player

Listening to a tape

1 Press (OPEN) and insert a cassette.

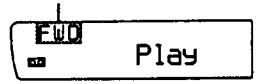


Playback starts automatically.

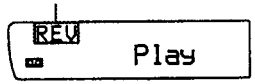
2 Close the front panel.

If a cassette is already inserted, press (SOURCE) until "FWD" or "REV" appears to start playback.

The side facing up is being played.



The side facing down is being played.



Tips

- *To change the tape transport direction, press (MODE) (◀II▶).*
- *"Metal" appears in the display when you insert a metal or CrO2 tape (Auto Metal function).*

To	Press
Stop playback	(OFF)
Eject the cassette	(OPEN) then ⏏

Fast-winding the tape

During playback, press either side of (SEEK/AMS) for one second.

Fast-forward

Rewind

To start playback while fast-forwarding or rewinding, press (MODE) (◀II▶).

This section extracted from instruction manual.

Locating the beginning of a track — *Automatic Music Sensor (AMS)*

You can skip up to nine tracks at one time.

During playback, press either side of (SEEK/AMS) momentarily.

To locate succeeding tracks

To locate preceding tracks

Note

The AMS function may not work when:
- *the blanks between tracks are shorter than four seconds.*
- *there is noise between tracks.*
- *there are long sections of low volume or quiet sections.*

Changing the displayed item

Each time you press (DSPL), the item changes as follows:

Tape playback → Clock → Frequency*

* *While the AFTA function is activated.*

EN

Playing tracks repeatedly

— Repeat play

You can repeat play the current track.

1 During playback press (SHIFT).
Each time you press (SHIFT), only the items you can select light up.

2 Press (6) (REP).
Repeat play starts.

To go back to the normal playback mode, press (6) again.

3 Press (SHIFT).

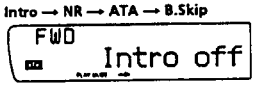
Playing a tape in various modes

You can play the tape in various modes:
- Intro (Intro Scan) lets you play the first 10 seconds of all the tracks.
- NR (Dolby NR) lets you select the Dolby* NR B system.
- ATA (Automatic Tuner Activation) turns on the tuner automatically while fast-winding the tape.
- B.Skip (Blank Skip) skips blanks longer than eight seconds.

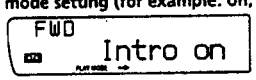
* *Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.*

1 Press (SHIFT), then press (3) (PLAY MODE) repeatedly until the desired play mode appears.
Each time you press (3), the item changes as follows:

Intro → NR → ATA → B.Skip



2 Press (4) (→) to select the desired play mode setting (for example: on, NR B).



Playback starts.

3 Press (SHIFT).

To go back to the normal playback mode, select "off" in step 2 above.

Radio

Memorising stations automatically

— Best Tuning Memory (BTM)

The unit selects the stations with the strongest signals and memorises them. You can store up to 10 stations on each band (FM 1, FM 2, MW and LW).

Caution

When tuning in stations while driving, use Best Tuning Memory to prevent accidents.

1 Press (SOURCE) repeatedly to select the tuner.
Each time you press (SOURCE), the source changes as follows:

Tape ⟷ Tuner

2 Press (MODE) repeatedly to select the desired band.
Each time you press (MODE), the band changes as follows:

FM 1 → FM 2 → MW → LW

3 Press (SHIFT), then press (3) (PLAY MODE) repeatedly until "B.T.M" appears.

4 Press (4) (→) until "B.T.M" flashes.
The unit stores stations in the order of their frequencies on the number buttons.
A beep sounds and the setting is stored.

5 Press (SHIFT).

Notes
- *The unit does not store stations with weak signals. If only a few stations are received, some number buttons remain empty.*
- *When a preset number is indicated in the display, the unit starts storing stations from the one currently displayed.*

Memorising only the desired stations

You can store up to 10 stations on each band (20 for FM 1 and FM 2, 10 for MW or LW) in the order of your choice.

1 Press (SOURCE) repeatedly to select the tuner.

2 Press (MODE) repeatedly to select the desired band.

3 Press either side of (SEEK/AMS) to tune in the station you want to store on the number button.

4 Keep the desired number button (1) to (10) pressed until "MEM" appears in the display.

The number button indication appears in the display.

Note

If you try to store another station on the same number button, the previously stored station will be erased.

Receiving the memorised stations

1 Press (SOURCE) repeatedly to select the tuner.

2 Press (MODE) repeatedly to select the desired band.

3 Press the number button (1) to (10) momentarily where the desired station is stored.

EN

Cassette Player/Radio

If you cannot tune in a preset station

Press either side of (SEEK/AMS) momentarily to search for the station (automatic tuning).
Scanning stops when the unit receives a station. Press either side of (SEEK/AMS) repeatedly until the desired station is received.

Note
If the automatic tuning stops too frequently, press (SHIFT), then press ③ (PLAY MODE) repeatedly until "Local" (local seek mode) appears. Then press ④ (→) to select "Local on." Press (SHIFT).
Only the stations with relatively strong signals will be tuned in.

Tip
If you know the frequency of the station you want to listen to, press and hold down either side of (SEEK/AMS) for a few seconds until the desired frequency appears (manual tuning).

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If FM stereo reception is poor — Monaural Mode

1 Press (SHIFT), then press ③ (PLAY MODE) repeatedly until "Mono" appears.

2 Press ④ (→) repeatedly until "Mono on" appears.
The sound improves, but becomes monaural ("ST" disappears).

3 Press (SHIFT).

To go back to the normal mode, select "Mono off" in step 2 above.

Changing the displayed item

Each time you press (DSPL), the item changes as follows:

Station name ⟷ Clock

RDS

Overview of the RDS function

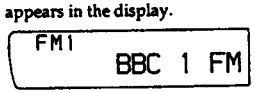
The Radio Data System (RDS) is a broadcasting service that allows FM stations to send additional digital information along with the regular radio programme signal. Your car stereo offers you a variety of services. Here are just a few: re-tuning the same programme automatically, listening to traffic announcements and locating a station by programme type.

Notes
- *Depending on the country or region, not all of the RDS functions are available.*
- *RDS may not work properly if the signal strength is weak or if the station you are tuned to is not transmitting RDS data.*

Displaying the station name

The name of the station currently received lights up in the display.

Select an FM station.
When you tune in an FM station that transmits RDS data, the station name appears in the display.



Note
The "•" indication means that an RDS station is being received.

Changing the displayed item

Each time you press (DSPL), the item changes as follows:

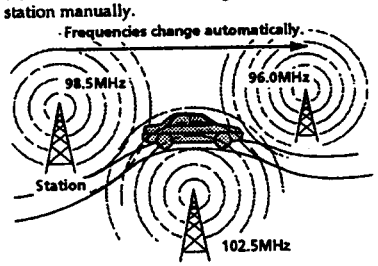
Frequency → Clock → Station name

Note
"NO Name" appears if the received station does not transmit RDS data.

Re-tuning the same programme automatically

— Alternative Frequencies (AF)

The Alternative Frequencies (AF) function automatically selects and re-tunes the station with the strongest signal in a network. By using this function, you can continuously listen to the same programme during a long-distance drive without having to re-tune the station manually.



1 Select an FM station.

2 Press (AF/TA) repeatedly until "AF on" appears.
The unit starts searching for an alternative station with a stronger signal in the same network.

Note
When there is no alternative station in the area and you do not need to search for an alternative station, turn the AF function off by pressing (AF/TA) repeatedly until "AF TA off" appears.

Changing the displayed item

Each time you press (AF/TA), the item changes as follows:

AF on → TA on → AF TA on* → AF TA off

* *Select this to turn on both the AF and TA functions.*

Notes
- *"NO AF" and the station name flash alternately, if the unit cannot find an alternative station in the network.*
- *If the station name starts flashing after selecting a station with the AF function on, this indicates that no alternative frequency is available. Press (SEEK/AMS) while the station name is flashing (within eight seconds). The unit starts searching for another frequency with the same PI (Programme Identification) data ("PI seek" appears and no sound is heard). If the unit cannot find another frequency, "NO PI" appears, and the unit returns to the originally selected frequency.*

Listening to a regional programme

The "REG on" (regional on) function lets you stay tuned to a regional programme without being switched to another regional station. (Note that you must turn the AF function on.) The unit is factory preset to "REG on," but if you want to turn off the function, do the following.

1 Press (SHIFT), then press ③ (PLAY MODE) repeatedly until "REG" appears.

2 Press ④ (→) repeatedly until "REG off" appears.

3 Press (SHIFT).
Note that selecting "REG off" might cause the unit to switch to another regional station within the same network.

To go back to the regional on setting, select "REG on" in step 2 above.

Note
This function does not work in the United Kingdom and in some other areas.

Local link function (United Kingdom only)

The Local Link function lets you select other local stations in the area, even though they are not stored on your number buttons.

1 Press a number button that has a local station stored on it.

2 Within five seconds, press the number button of the local station again.

3 Repeat this procedure until the desired local station is received.

EN

Listening to traffic announcements

The Traffic Announcement (TA) and Traffic Programme (TP) data let you automatically tune in an FM station that is broadcasting traffic announcements even though you are listening to other programme sources.

Press (AF/TA) repeatedly until "TA on" or "AF TA on" appears.
The unit starts searching for traffic information stations. "TP" appears in the display when the unit finds a station broadcasting traffic announcements. When the traffic announcement starts, "TA" flashes. The flashing stops when the traffic announcement is over.

Tip
If the traffic announcement starts while you are listening to another programme source, the unit automatically switches to the announcement and goes back to the original source when the announcement is over.

Notes
- *"NO TP" flashes for five seconds if the received station does not broadcast traffic announcements. Then, the unit starts searching for a station that broadcasts traffic announcements.*
- *When "EON" appears with "TP" in the display, the current station makes use of traffic announcements broadcast by other stations in the same network.*

To cancel the current traffic announcement

Press (AF/TA) momentarily.
To cancel all traffic announcements, turn off the function by pressing (AF/TA) until "AF TA off" appears.

Presetting the volume of traffic announcements

You can preset the volume level of the traffic announcements beforehand so you won't miss the announcement. When a traffic announcement starts, the volume will be automatically adjusted to the preset level.

1 Select the desired volume level.

2 Press (AF/TA) for two seconds.
"TA" appears and the setting is stored.

Receiving emergency announcements

If an emergency announcement comes in while you are listening to the radio, the programme will be automatically switched to the announcement. If you are listening to a source other than the radio, the emergency announcements will be heard if you set AF or TA to on. The unit will then automatically switch to these announcements no matter what you are listening to at the time.

Presetting the RDS stations with the AF and TA data

When you preset the RDS stations, the unit stores each station's data as well as its frequency, so you don't have to turn on the AF or TA function every time you tune in the preset station. You can select a different setting (AF, TA, or both) for each preset station, or the same setting for all preset stations.

Presetting the same setting for all preset stations

1 Select an FM band.

2 Press (AF/TA) repeatedly to select either "AF on," "TA on" or "AF TA on" (for both AF and TA functions).
Note that selecting "AF TA off" stores not only RDS stations, but also non-RDS stations.

3 Press (SHIFT), then press (3) (PLAY MODE) repeatedly until "B.T.M" appears.

4 Press (4) (→) until "B.T.M" flashes.

5 Press (SHIFT).

Presetting different settings for each preset station

1 Select an FM band, and tune in the desired station.

2 Press (AF/TA) repeatedly to select either "AF on," "TA on" or "AF TA on" (for both AF and TA functions).

3 Press the desired number button for two seconds until "MEM" appears.
Repeat from step 1 for presetting other stations.

Tip
If you want to change the preset AF and/or TA setting after you tune in the preset station, you can do so by turning on/off the AF or TA function.

Locating a station by programme type

You can locate the station you want by selecting one of the programme types shown below.

Note
If you are in a country or regions where EON data is not transmitted, you can use this function only for the stations you have tuned in once.

Programme types	Display
News	NEWS
Current Affairs	AFFAIRS
Information	INFO
Sports	SPORT
Education	EDUCATE
Drama	DRAMA
Culture	CULTURE
Science	SCIENCE
Varied	VARIED
Popular Music	POP M
Rock Music	ROCK M
Middle of the Road Music	M.O.R. M
Light Classical	LIGHT M
Classical	CLASSICS
Other Music Type	OTHER M
Weather	WEATHER
Finance	FINANCE
Children's programmes	CHILDREN
Social Affairs	SOCIAL A
Religion	RELIGION
Phone In	PHONE IN
Travel	TRAVEL
Leisure	LEISURE
Jazz Music	JAZZ
Country Music	COUNTRY
National Music	NATION M
Oldies Music	OLDIES
Folk Music	FOLK M
Documentary	DOCUMENT
Not specified	NONE

Note
You can not use this function in some countries where no PTY (Programme Type selection) data is available.

1 Press (PTY/LIST) during FM reception until "PTY" appears.

The current programme type name appears if the station is transmitting the PTY data. "- - - - -" appears if the received station is not an RDS station, or if the RDS data has not been received.

2 Press (PTY/LIST) repeatedly until the desired programme type appears.
The programme types appear in the order shown in the above table. Note that you cannot select "NONE" (Not specified) for searching.

3 Press either side of (SEEK/AMS).
The unit starts searching for a station broadcasting the selected programme type. When the unit finds the programme, the programme type appears again for five seconds. "NO" and the programme type flash for five seconds if the unit cannot find the programme type. It then returns to the previous station.

EN

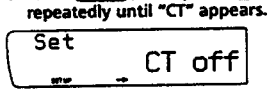
EN

RDS

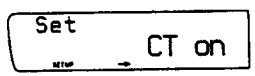
Setting the clock automatically

The CT (Clock Time) data from the RDS transmission sets the clock automatically.

1 Press (SHIFT), then press (2) (SET UP) repeatedly until "CT" appears.



2 Press (4) (→) repeatedly until "CT on" appears.
The clock is set.



3 Press (SHIFT) to return to the normal display.

To cancel the CT function

Select "CT off" in step 2 above.

Notes

- *The CT function may not work even though an RDS station is being received.*
- *There might be a difference between the time set by the CT function and the actual time.*

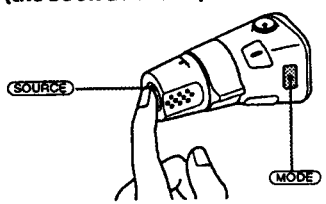
EN

Other Functions

Using the rotary remote

The rotary remote works by pressing buttons and/or rotating controls.
You can control the optional CD and MD changer with the rotary remote.

By pressing the button (the SOURCE button)



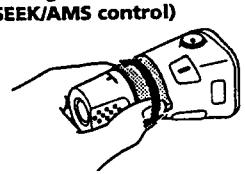
Each time you press (SOURCE), the source changes as follows:
Tuner → CD → MD → Tape

Pressing (MODE) changes the operation in the following ways

- the tape transport direction
- the band: FM1 → FM2 → MW → LW
- the CD changer: CD1 → CD2 → ....
- the MD changer: MD1 → MD2 → ....

Tip
You can turn on this unit by pressing (SOURCE) on the rotary remote.

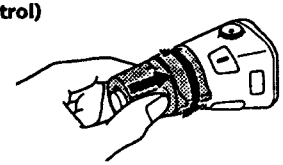
By rotating the control (the SEEK/AMS control)



Rotate the control momentarily and release it to:

- Locate the beginnings of the tracks on the tape. Rotate and hold the control, and release it to fast-wind the tape. To playback, rotate and hold the control again, and release it.
- Locate a specific track on a disc. Rotate and hold the control until you locate the specific point in a track, then release it to start playback.
- Tune in stations automatically. Rotate and hold the control to tune in the specific station.

By rotating the control while pushing in (the PRESET/DISC control)

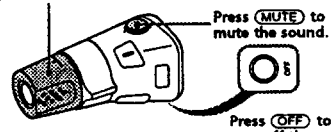


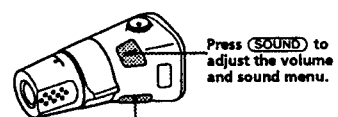
Push in and rotate the control to:

- Receive the stations memorised on the preset buttons.
- Change the disc.

Other operations

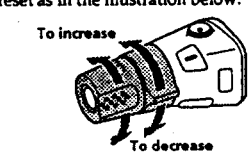
Rotate the VOL control to adjust the volume.



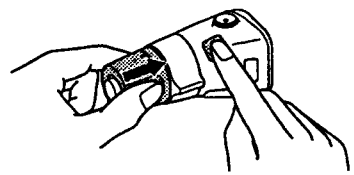


Changing the operative direction

The operative direction of controls is factory preset as in the illustration below.



If you need to mount the rotary remote on the right of the steering column, you can reverse the operative direction of the controls.



Press (DSPL) two seconds while pushing the VOL control.

Tip
You can change the operative direction of controls with the unit, refer to "Changing the sound and display settings" (page 14).

Adjusting the sound characteristics

You can adjust the bass, treble, balance and fader.
Each source can store the bass and treble level respectively.

1 Select the item you want to adjust by pressing (SOUND) repeatedly.

VOL (volume) → BAS (bass) → TRE (treble) → BAL (balance) → FAD (fader)

2 Adjust the selected item by rotating the dial.
Adjust within three seconds after selection. (After three seconds, the dial works as the volume control dial.)

Muting the sound

The unit decreases the volume automatically when a telephone call is received (Telephone-mute function).

EN

Changing the sound and display settings

You can set:
- Clock (page 5)
- CT (Clock Time) (page 12)
- D. Info (Dual Information) to display the clock and the play mode at the same time (ON), or to display the information alternately (OFF).
- Amber/Green to change the illumination colour to amber or green.
- Dimmer to change the brightness of the display.
  — Select "Auto" to dim the display only when you turn the lights on.
  — Select "on" to dim the display.
- Contrast to adjust the contrast if the indications in the display are not recognizable because of the unit's installed position.
- Beep to turn on or off the beeps.
- RM (Rotary Remote) to change the operative direction of the controls of the rotary remote.
  — Select "norm" to use the rotary remote in the factory preset position.
  — Select "rev" when you mount the rotary remote on the right sife of the steering column.
- Loud (Loudness) to enjoy bass and treble even at low volume. The bass and treble will be reinforced.
- A. Scrl (Auto Scroll)

Note
The displayed item will differ depending on the source.

1 Press (SHIFT), then press ② (SET UP).

2 Press ② (SET UP) repeatedly until the desired setting mode appears.
Each time you press ② (SET UP), the item changes as follows:
Clock → CT → D.Info → Amber/Green → Dimmer → Contrast → Beep → RM → Loud → A.Scrl

3 Press ④ (→) to select the desired setting (for example: "on" or "off").
For the "Contrast" setting, pressing ④ (→) makes the contrast higher, and pressing ① (←) makes the contrast lower.

4 Press (SHIFT).
When the mode setting is complete, the normal playback mode appears.

With Optional Equipment

CD/MD Changer

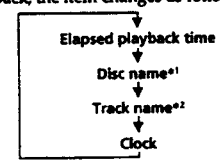
Playing a CD or MD

1 Press (SOURCE) repeatedly to select the CD or MD.

2 Press (MODE) until the desired changer indication appears in the display.
CD/MD playback starts.

Changing the displayed item

Each time you press (DSPL) during CD/MD playback, the item changes as follows:



1 If you have not labeled the CD, "NO Name" appears in the display. If there is no prerecorded name for an MD, "NO D. Name" appears in the display.
2 If the track name of an MD is not prerecorded, "NO T. Name" appears in the display.

Tip
If the name of the MD is too long, you can scroll it across the display by pressing (SHIFT), then ① (←).

Automatically scrolling a disc name — Auto Scroll

If the disc name or track name on an MD exceeds 10 characters and the Auto Scroll function is on, the name automatically scrolls on the display as follows.
- *The disc name appears when the disc has changed (if the disc name is selected).*
- *The track name appears when the track has changed (if the track name is selected).*
- *The disc or track name appears depending on the setting when you press (SOURCE) to select an MD.*

If you press (DSPL) to change the display item, the disc or track name of the MD is scrolled automatically whether you set the function on or off.

1 Press (SHIFT), then press ② (SET UP) repeatedly until "A.Scrl" appears.

2 Press ④ (→) to select "A.Scrl on."

3 Press (SHIFT).

To cancel Auto Scroll, select "A.Scrl off" in step 2 above.

Displaying the recording date of the currently selected MD

Press (DSPL) for two seconds during MD playback.
The recording date of the track is displayed for about three seconds.

Locating a specific track — Automatic Music Sensor (AMS)

During playback, press either side of (SEEK/AMS) once for each track you wish to skip.

To locate succeeding tracks

To locate preceding tracks

Locating a specific point in a track — Manual Search

During playback, press and hold either side of (SEEK/AMS). Release the button when you have found the desired point.

To search forward

To search backward

Locating a disc by disc number — Direct Disc Selection

Press the number button that corresponds with the desired disc number.
The desired disc in the currently selected changer begins playback.

Scanning the tracks — Intro Scan

You can play the first 10 seconds of all the tracks on the current disc.

1 During playback, press (SHIFT), then press ③ (PLAY MODE) repeatedly until "Intro" appears.

2 Press ④ (→) repeatedly until "Intro on" appears.
Intro Scan starts.

3 Press (SHIFT).

To go back to the normal playback mode, select "Intro off" in step 2 above.

Playing tracks repeatedly — Repeat Play

You can select:
- Repeat 1 to repeat a track.
- Repeat 2 to repeat a disc.
- Repeat 3 to repeat all the discs in the current changer when you connect two or more changers.

1 During playback, press (SHIFT), then press ⑥ (REP) repeatedly until "Repeat" appears.

2 Press ⑥ (REP) repeatedly until the desired setting appears.
→ Repeat 1 → Repeat 2 → Repeat 3 → Repeat off →
Repeat play starts.

3 Press (SHIFT).

To go back to the normal playback mode, select "Repeat off" in step 2 above.

Playing tracks in random order — Shuffle Play

You can select:
- Shuf 1 to play the tracks on the current disc in random order.
- Shuf 2 to play the tracks in the current changer in random order.
- Shuf 3 to play all the tracks in random order when you connect two or more changers.

1 During playback, press (SHIFT), then press ⑦ (SHUF) repeatedly until "Shuf" appears.

2 Press ⑦ (SHUF) repeatedly until the desired setting appears.
→ Shuf 1 → Shuf 2 → Shuf 3 → Shuf off →
Shuffle play starts.

3 Press (SHIFT).

To go back to the normal playback mode, select "Shuf off" in step 2 above.

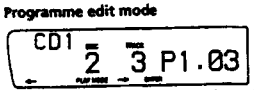
Creating a programme

— Programme Memory (CD changer with programme memory function)

You can play tracks in the order you want by making your own programme. You can make two programmes: Programme 1 and Programme 2. You can select up to 12 tracks for each programme. You can store the programmes in memory.

1 Press (SHIFT), then press ③ (PLAY MODE) for two seconds.

Programme edit mode



"P1" shows Programme 1 is selected.

If you have labeled the disc, the bank edit mode appears. Press ③ (PLAY MODE) to display "P1" above.

To select Programme 2, press ④ (→) repeatedly until "P2" appears.

2 Select the track you want.

❶ Press (SOURCE) repeatedly to select the CD.

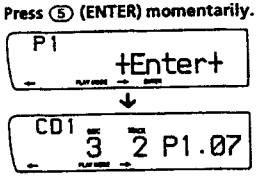
❷ Press (MODE) repeatedly to select the changer.

❸ Press (SHIFT), then press the number button to select the disc.

❹ Press (SHIFT).

❺ Press either side of (SEEK/AMS) to select the track.

3 Press ⑤ (ENTER) momentarily.



4 To continue entering tracks, repeat steps 2 and 3.

5 When you finish entering tracks, press ③ (PLAY MODE) for two seconds.

6 Press (SHIFT).

Notes

- *"*Wait*" appears in the display while the unit is reading the data, or when a disc has not been put into the unit.*
- *"*Mem full*" appears in the display when you try to enter more than 12 tracks into a programme.*

Playing the stored programme

Changing the disc order in the changer will not affect programme memory play.

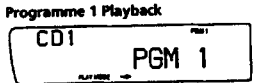
You can select:
- PGM 1 to play Programme 1.
- PGM 2 to play Programme 2.
- PGM 1+2 to play Programmes 1 and 2.

1 Press (SHIFT).

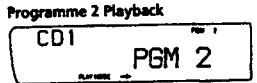
2 Press ③ (PLAY MODE) repeatedly until "PGM" appears.

3 Press ④ (→) repeatedly until the desired programme appears.
Programme play starts.

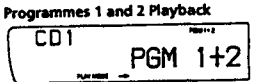
Programme 1 Playback



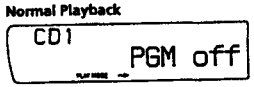
Programme 2 Playback



Programmes 1 and 2 Playback



Normal Playback



4 Press (SHIFT).

To go back to the normal playback mode, select "PGM off" in step 3 above.

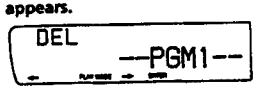
Notes

- *If you press a number button during programme memory play, programme memory play is interrupted, and playback of the selected disc starts.*
- *"NO Data" appears in the display if no track is stored in the programme.*
- *If a track stored into the programme memory is not in the disc magazine, the track will be skipped.*
- *When the disc magazine contains not a single track stored into the programme memory, or when the programme information has not been loaded yet, "Not Ready" appears.*

Erasing the entire programme

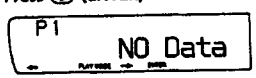
1 Press (SHIFT), then press ③ (PLAY MODE) for two seconds.
If you have labeled the disc, the bank edit mode appears. Press ③ (PLAY MODE) to display "P1" above.

2 Press ① (←) repeatedly until "DEL" appears.



To erase Programme 2, press ④ (→) repeatedly until "P2" appears.

3 Press ⑤ (ENTER) for two seconds.



The entire programme is erased.

4 When you finish erasing programmes, press ③ (PLAY MODE) for two seconds.

5 Press (SHIFT).

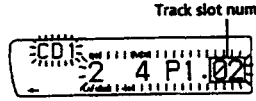
Adding tracks to the programme

1 Press (SHIFT), then press ③ (PLAY MODE) for two seconds.
If you have labeled the disc, the bank edit mode appears. Press ③ (PLAY MODE) to display "P1" above.

To select Programme 2, press ④ (→) repeatedly until "P2" appears.

2 Press ① (←) or ④ (→) to select the track slot number where you want to insert a track.

Track slot number



3 Press either side of (SEEK/AMS) to select the track you want to insert.

4 Press ⑤ (ENTER) momentarily to enter the track.
The current track in that slot number and the succeeding tracks shift down.
To continue inserting tracks, repeat steps 2 through 4.

Note

*Once all 12 slots have been filled, "*Mem full*" appears in the display, and you cannot insert tracks.*

5 When you finish inserting tracks, press ③ (PLAY MODE) for two seconds.

6 Press (SHIFT).

Erasing the tracks in the programme

1 Press (SHIFT), then press ③ (PLAY MODE) for two seconds.
If you have labeled the disc, the bank edit mode appears. Press ③ (PLAY MODE) to display "P1" above.

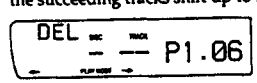
To select Programme 2, press ④ (→) repeatedly until "P2" appears.

2 Press ① (←) or ④ (→) to select the track you want to erase.

Track Slot Number

The track currently registered in slot 6 of Programme 1.

3 Press ⑤ (ENTER) for two seconds.
When you erase a track from a slot number, the succeeding tracks shift up to fill the gap.



4 To continue erasing tracks, repeat steps 2 and 3.

5 When you finish erasing tracks, press ③ (PLAY MODE) for two seconds.

6 Press (SHIFT).

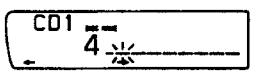
EN

Labeling a CD

— Disc Memo/Custom File
(CD changer with custom file function)

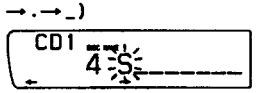
You can label each disc with a personalized name. You can enter up to 8 characters for a disc. If you label a CD, you can locate a disc by name (page 19) and select the specific tracks for playback (page 19).

1 Play the CD and press (PTY/LIST) for two seconds.



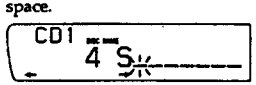
2 Enter the characters.

❶ Rotate the dial clockwise direction to select the desired characters.
(A → B → C → ··· Z → 0 → 1 → 2 → ··· 9 → + → − → * → / → \ → > → < → . → _)



If you rotate the dial counterclockwise, the characters appear in reverse order. If you want to put a blank space between characters, select "_" (under-bar).

❷ Press ④ (→) after locating the desired character.
The flashing cursor moves to the next space.



If you press ① (←), the flashing cursor moves to the left.

❸ Repeat steps ❶ and ❷ to enter the entire name.

3 To return to the normal CD playback mode, press (PTY/LIST) for two seconds.

Tip
To erase/correct a name, enter "_" (under-bar) for each character.

Displaying the disc memo

During playback, press (DSPL).

Each time you press (DSPL) during CD playback, the item changes as follows:

→ Elapsed playback time → Disc name → Clock →

Erasing the disc memo

1 Press (SOURCE) repeatedly to select CD.

2 Press (MODE) repeatedly to select the CD changer.

3 Press (PTY/LIST) for two seconds.

4 Press (DSPL) for two seconds.
"Delete" and the disc memo appear in the display.

5 Rotate the dial to select the name you want to erase.

6 Press ⑤ (ENTER) for two seconds.
The name is erased.
Repeat steps 5 and 6 if you want to erase other names.

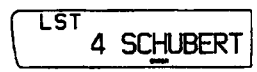
7 Press (PTY/LIST) for two seconds.
The unit returns to the normal CD playback mode.

Locating a disc by name

— List-up (CD changer with custom file function or MD changer)

You can use this function for the discs that have been assigned a personalized name. For more information on disc names, refer to "Labeling a CD" (page 18).

1 Press (PTY/LIST) momentarily.
The names assigned to the disc currently playing and the next disc to be played appear in the display. The name assigned to currently playing disc is flashing.



2 Press (PTY/LIST) repeatedly until you find the desired disc.

3 Press ⑤ (ENTER) to play back the disc.

Notes
- *To go back to the normal display, press (DSPL). Once a disc name has been displayed for five seconds, the display goes back to the normal playback mode.*
- *The track names are not displayed during MD playback.*
- *If there are no discs in the magazine, "NO Disc" appears in the display.*
- *If a disc has not been assigned a custom file, "********" appears in the display.*
- *If the disc information has not been read by the unit, "?" appears in the display. To load the disc, first press a number button, then choose a disc that has not been loaded.*
- *The information appears only in upper cases. There are also some letters which cannot be displayed (during MD playback).*

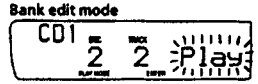
Selecting the specific tracks for playback

— Bank/Custom File
(CD changer with custom file function)

If you label the disc, you can set the unit to skip tracks and play only the tracks you want.

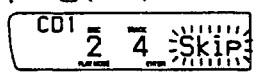
1 Start playing the disc and press (SHIFT). Then press ③ (PLAY MODE) for two seconds.

Bank edit mode



Note
If you have not labeled the disc, the bank edit mode does not appear and the programme edit mode appears. To go back to the normal playback mode, press ③ (PLAY MODE) for two seconds.

2 Press either side of (SEEK/AMS) to select the track number you want to skip and press ⑤ (ENTER).



The indication changes from "Play" to "Skip." If you want to return to "Play," press ⑤ (ENTER) again.

3 Repeat step 2 to set the "Play" or "Skip" mode on all the tracks.

4 Press ③ (PLAY MODE) for two seconds.

5 Press (SHIFT).

Notes
- *You can set the "Play" and "Skip" modes on up to 24 tracks.*
- *You cannot set the "Skip" mode on all the tracks.*

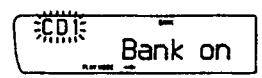
Playing the specific tracks only

You can select:
- Bank on to play the tracks with the "Play" setting.
- Bank inv (inverse) to play the tracks with the "Skip" setting.

1 During playback, press (SHIFT), then press ③ (PLAY MODE) repeatedly until "Bank" appears.

2 Press ④ (→) repeatedly until the desired setting appears.

→ Bank on → Bank inv → Bank off →



Playback starts from the track following the current one.

3 Press (SHIFT).

To go back to the normal playback mode, select "Bank off" in step 2 above.

Connections

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Connect the power connecting cord ⑧ to the unit and speakers before connecting it to the auxiliary power connector.
- **Run all ground wires to a common ground point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in series with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual components' fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.

If your car has no accessory position on the ignition key switch — POWER SELECT switch

The illumination on the front panel is factory set to be turned on even while the unit is not in use. However, this setting may cause some car battery wear if your car has no accessory position on the ignition key switch. To avoid this battery wear, set the POWER SELECT switch located on the bottom of the unit to the ⑧ position, then press the reset button. The illumination is reset to stay off while the unit is not in use.

Note

The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the ⑧ position.

Conexiones

Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Conecte el cable de conexión de alimentación ⑧ a la unidad y los altavoces antes de conectarlo al conector de alimentación auxiliar.
- **Conecte todos los conductores de puesta a masa a un punto común.**
- Conecte el cable amarillo a un circuito libre de automóvil de potencia nominal superior a la del fusible de la unidad. Si conecta esta unidad en serie con otros componentes estéreo, la potencia nominal del circuito del automóvil a los que dichos componentes estén conectados debe ser superior a la suma de la potencia nominal del fusible de los componentes. Si no existen circuitos de automóvil de potencia nominal igual a la del fusible de la unidad, conecte ésta directamente a la batería. Si no hay circuitos de automóvil disponibles para conectar esta unidad, conecte la misma a un circuito de automóvil de potencia nominal superior a la del fusible de la unidad de forma que no se desactiven otros circuitos si el fusible de dicha unidad se funde.

Si el automóvil no dispone de posición para accesorios en la llave de encendido

— Selector POWER SELECT

La iluminación del panel frontal ha sido ajustada en fábrica para que esté activada aunque la unidad no se encuentre en funcionamiento. Sin embargo, este ajuste puede provocar cierta descarga de la batería del automóvil **si éste no dispone de posición para accesorios en la llave de encendido.** Para evitar esto, **ponga el selector POWER SELECT, situado en la base de la unidad, en la posición ⑧ y, después, presione el botón de reposición.** La iluminación estará desactivada cuando la unidad no se encuentre en funcionamiento.

Nota

La alarma de precaución del panel frontal no se activará cuando el selector POWER SELECT se encuentre en la posición ⑧.

Anslutning

Säkerhetsföreskrifter

- Denna bilstereo är endast avsedd för anslutning till ett negativt jordat, 12 V bilbatteri.
- Anslut strömkabeln ⑧ till enheten och högtalarna innan du ansluter den till den yttre strömanslutning.
- **Dra samtliga jordledningar till en och samma jordningspunkt.**
- Anslut den gula kabeln till en ledig bilkrets med en högre ampere än enhetens. Om du seriekopplar enheten till andra stereokomponenter måste den bilkrets de kopplas till ha en högre ampere än summan av de enskilda delarnas amperestyrka. Om det inte finns några bilkretsar med en så hög amperestyrka som enhetens ska du ansluta enheten direkt till batteriet. Om inga bilkretsar finns för anslutning till enheten ska du ansluta enheten till en bilkrets med en högra ampere än enhetens styrka så att inga andra säkringar går om enhetens säkring smälter.

Montera bilstereon i en bil vars tändlås inte har något strömläge

— Omkopplaren POWER SELECT

Innan bilstereon levererades från fabriken ställdes belysningen i teckenfönstret in så att den lyser också när bilstereon inte används. Detta kan emellertid orsaka urladdning av batteriet när du använder bilstereon i en bil, **vars tändlås saknar läget ACC (strömläge). Skjut omkopplaren POWER SELECT på bilstereons undersida till läge ⑧, och tryck sedan på återställningsknappen** för att undvika att bilbatteriet laddas ur. Nu lyser inte längre belysningen i teckenfönstret när bilstereon inte används.

Observera

Varningssignalen, som varnar om du inte har tagit loss frontpanelen, ljuder inte när omkopplaren POWER SELECT står i läge ⑧.

Ligações

Advertência

- Este aparelho foi concebido para funcionar somente com corrente contínua de 12 V com massa negativa.
- Ligue o cabo de alimentação de corrente ⑧ ao aparelho e aos alifalantes antes de o ligar ao conector de corrente auxiliar.
- **Ligue todos os fios de terra num ponto de massa comum.**
- Ligue o cabo amarelo a um circuito eléctrico livre do automóvel, cuja tensão seja superior à dos fusíveis do aparelho. Se ligar este aparelho em série com outros componentes estéreo, a tensão do circuito eléctrico do automóvel onde os ligar tem de ser superior à soma das tensões dos fusíveis de todos os componentes individuais. Se não houver nenhum circuito eléctrico do automóvel com uma tensão tão elevada como a dos fusíveis do aparelho, ligue-o directamente à bateria. Se não estiver disponível nenhum circuito eléctrico do automóvel para ligação deste aparelho, ligue-o a um circuito eléctrico do automóvel com uma tensão superior à dos fusíveis do aparelho, de tal modo que, se o aparelho rebentar os fusíveis respectivos, nenhum outro circuito seja cortado.

Se o seu automóvel não estiver equipado com uma chave de ignição com posição acessórios

— Interruptor POWER SELECT

A iluminação do painel frontal é regulada na fábrica para se manter acesa, mesmo quando o aparelho não estiver ligado. No entanto, esta regulação pode provocar a descarga da bateria **se o aparelho for utilizado em automóveis sem chave de ignição com posição acessórios.** Para evitar a descarga da bateria, **regule o interruptor POWER SELECT, situado na base do aparelho, para a posição ⑧. Em seguida, carregue no botão de reinicialização.** A iluminação é regulada para ficar apagada enquanto o aparelho estiver desligado.

Nota

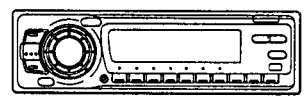
O alarme de advertência do painel frontal não é activado quando o interruptor POWER SELECT estiver regulado para a posição ⑧.

Change the position with a jeweler's screwdriver, etc.

Cambie la posición con un destornillador de relojero, etc.

Använd en skruvmejsel för finmekaniker eller ett liknande verktyg för att ändra på omkopplarläget.

Altere a posição do interruptor com uma chave de fendas de precisão, etc.



When you change the position of the switch, be sure to press the reset button after the connections are completed.

Cuando cambie la posición del selector, cerciórese de presionar los botón de reposición después de haber finalizado las conexiones.

Kom ihåg att trycka på återställningsknapp efter slutförda anslutningar när väljarläget ändrats.

Se alterar a posição do selector tem decarregar numa das tecla de reinicialização depois de ter terminado de fazer todas as ligações.

Notes on the control leads

- *The power aerial control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the ATA (Automatic Tuner Activation), AF (Alternative Frequency) or the TA (Traffic Announcement).*
- *A power aerial without a relay box cannot be used with this unit.*

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Warning

If you have a power aerial without a relay box, connecting this unit with the supplied power connecting cord ⑧ may damage the aerial.

Notas sobre conductores de control

- *El conductor de control de la antena motorizada (azul) suministrará +12 V CC cuando conecte la alimentación del sintonizador o cuando active la función de actuación automática del sintonizador (ATA), frecuencia alternativa (AF) o la de anuncios de tráfico (TA).*
- *Con esta unidad no podrá utilizarse una antena motorizada sin caja de relés.*

Conexión para protección de la memoria

Si conecta el conductor de entrada amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque ponga la llave de encendido en la posición OFF.

Notas sobre la conexión de los altavoces

- *Antes de conectar los altavoces, desconecte la alimentación de la unidad.*
- *Utilice altavoces con una impedancia de 4 a 8 ohmios, y con la potencia máxima admisible adecuada, ya que de lo contrario podría dañarlos.*
- *No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.*
- *No intente conectar los altavoces en paralelo.*
- *No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciese, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.*

Advertencia

Si dispone de una antena motorizada sin dispositivo de relé, la conexión de esta unidad con el cable de conexión de alimentación ⑧ suministrado puede dañar la antena.

Att observera angående de olika styrkablarna

- *Motorantennens styrkabel (blå) leder +12 volts likström när bilradion slås på eller när radiomottagningsautomatik ATA, mottagning av alternativa frekvenser AF eller mottagning av trafikmeddelanden TA.*
- *En motorantenn utan styrreläslusa kan inte anslutas till denna bilstereo.*

Anslutning för minnesstöd

När du ansluter den gula, ingående strömkabeln försörjs minneskretsen med ström hela tiden, även när tändläset slås ifrån.

Att observera angående högtalarnas anslutning

- *Slå av bilstereon innan du ansluter högtalarna.*
- *Anslut endast högtalare, vars impedans varierar från 4 till 8 ohm och som har tillräcklig effekthanterings-kapacitet för att skydda högtalarna mot skador.*
- *Anslut inte något av högtalaruttagen till bilens chassi. Anslut inte heller uttagen på höger högtalare till uttagen på vänster högtalare.*
- *Anslut inte högtalarna parallellt.*
- *Anslut inte aktiva högtalare (med inbyggda slutsteg) till bilstereons högtalaruttag, eftersom de kan skada de aktiva högtalarna.*
  Var noga med att bara ansluta passiva högtalare till dessa uttag.

Varning

Om du har en motorantenn utan relädosa kan antennen skadas om du ansluter enheten med den medföljande strömkabeln ⑧.

Notas sobre os fios de controlo

- *O fio de controlo da antena eléctrica (azul) fornece +12 V CC quando da ligação do sintonizador ou da activação da função ATA (Activação automática do sintonizador), AF (Frequência Alternativa) ou TA (Boletins de Trifego).*
- *Uma antena motorizada sem um relé não pode ser utilizada com este aparelho.*

Ligação para alimentação contínua da memória

Quando, o fio amarelo de entrada de alimentação for ligado, os circuitos de memória ficarão com alimentação contínua, mesmo se a chave de ignição estiver desligada.

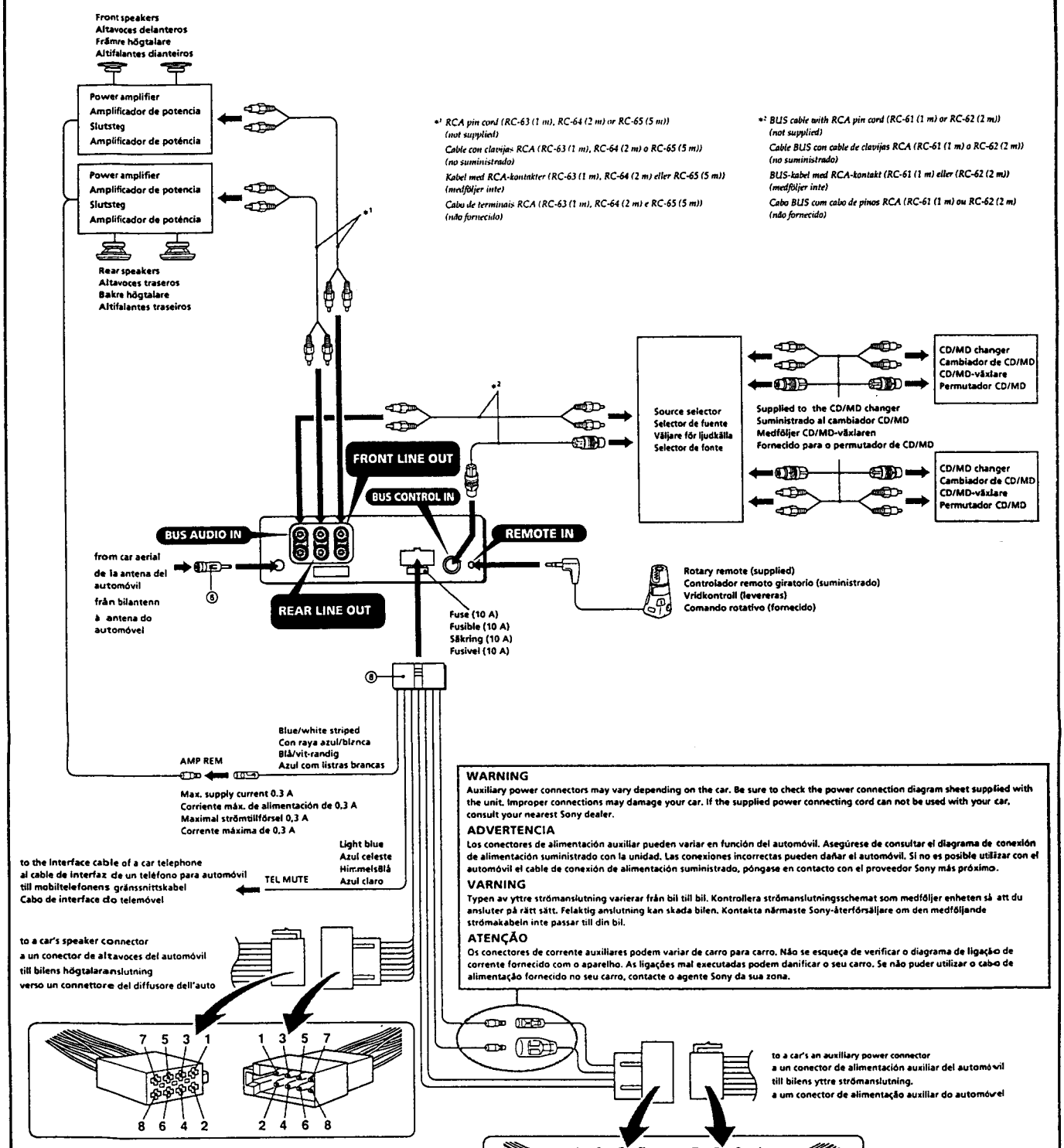
Notas sobre a ligação dos altifalantes

- *Antes de ligar os altifalantes, desligue o aparelho.*
- *Utilize altifalantes com impedâncias de 4 a 8 ohm, e com capacidade admissível de potência adequada. Caso contrário, os altifalantes poderão sofrer avarias.*
- *Não ligue os terminais do sistema de altifalantes ao chassis do automóvel, e não ligue os terminais do altifalante direito aos terminais do altifalante esquerdo.*
- *Não tente ligar os altifalantes em paralelo.*
- *Não ligue nenhum sistema de altifalantes activos (com amplificadores incorporados) aos terminais dos altifalantes do aparelho.*
  Caso o faça, poderá avariar o sistema de altifalantes activos. Portanto, não se esqueça de ligar altifalantes passivos a estes terminais.

Atenção

Se a antena eléctrica não tiver uma caixa de relé, o facto de ligar esta aparelho com a cabo de alimentação ⑧ fornecido, pode provocar danos na antena.

Connections example — Ejemplo de conexiones — Anslutningarna enligt exemplet — Exemplo de ligações


Front speakers
Altavoces delanteros
Främre högtalare
Altifalantes dianteiros
Power amplifier
Amplificador de potencia
Slutsteg
Amplificador de poténcia
Power amplifier
Amplificador de potencia
Slutsteg
Amplificador de poténcia
Rear speakers
Altavoces traseros
Bakre högtalare
Altifalantes traseiros
*1 RCA pin cord (RC-63 (1 m), RC-64 (2 m) or RC-65 (5 m)) (not supplied)
Cable con clavijas RCA (RC-63 (1 m), RC-64 (2 m) o RC-65 (5 m)) (no suministrado)
Kabel med RCA-kontakter (RC-63 (1 m), RC-64 (2 m) eller RC-65 (5 m)) (medföljer inte)
Cabo de terminais RCA (RC-63 (1 m), RC-64 (2 m) e RC-65 (5 m)) (não fornecido)
*2 BUS cable with RCA pin cord (RC-61 (1 m) or RC-62 (2 m)) (not supplied)
Cable BUS con cable de clavijas RCA (RC-61 (1 m) o RC-62 (2 m)) (no suministrado)
BUS-kabel med RCA-kontakt (RC-61 (1 m) eller (RC-62 (2 m)) (medföljer inte)
Cabo BUS com cabo de pinos RCA (RC-61 (1 m) ou RC-62 (2 m) (não fornecido)
FRONT LINE OUT
BUS CONTROL IN
BUS AUDIO IN
REMOTE IN
REAR LINE OUT
Source selector
Selector de fuente
Väljare för ljudkälla
Selector de fonte
CD/MD changer
Cambiador de CD/MD
CD/MD-växlare
Permutador CD/MD
Supplied to the CD/MD changer
Suministrado al cambiador CD/MD
Medföljer CD/MD-växlaren
Fornecido para o permutador de CD/MD
CD/MD changer
Cambiador de CD/MD
CD/MD-växlare
Permutador CD/MD
from car aerial
de la antena del automóvil
från bilantenn
à antena do automóvel
Rotary remote (supplied)
Controlador remoto giratorio (suministrado)
Vridkontroll (levereras)
Comando rotativo (fornecido)
Fuse (10 A)
Fusible (10 A)
Säkring (10 A)
Fusível (10 A)
Blue/white striped
Con raya azul/blanca
Blå/vit-randig
Azul com listras brancas
AMP REM
Max. supply current 0.3 A
Corriente máx. de alimentación de 0,3 A
Maximal strömtillförsel 0,3 A
Corrente máxima de 0,3 A
Light blue
Azul celeste
Himmelsblå
Azul claro
TEL MUTE
to the interface cable of a car telephone
al cable de interfaz de un teléfono para automóvil
till mobiltelefonens gränssnittskabel
Cabo de interface do telemóvel
to a car's speaker connector
a un conector de altavoces del automóvil
till bilens högtalaranslutning
verso un connettore del diffusore dell'auto
7 5 3 1
8 6 4 2
1 3 5 7
2 4 6 8
to a car's an auxiliary power connector
a un conector de alimentación auxiliar del automóvil
till bilens yttre strömanslutning.
a um conector de alimentação auxiliar do automóvel
1 3 5 7
2 4 6 8
7 5 3 1
8 6 4 2

WARNING

Auxiliary power connectors may vary depending on the car. Be sure to check the power connection diagram sheet supplied with the unit. Improper connections may damage your car. If the supplied power connecting cord can not be used with your car, consult your nearest Sony dealer.

ADVERTENCIA

Los conectores de alimentación auxiliar pueden variar en función del automóvil. Asegúrese de consultar el diagrama de conexión de alimentación suministrado con la unidad. Las conexiones incorrectas pueden dañar el automóvil. Si no es posible utilizar con el automóvil el cable de conexión de alimentación suministrado, póngase en contacto con el proveedor Sony más próximo.

VARNING

Typen av yttre strömanslutning varierar från bil till bil. Kontrollera strömanslutningsschemat som medföljer enheten så att du ansluter på rätt sätt. Felaktig anslutning kan skada bilen. Kontakta närmaste Sony-återförsäljare om den medföljande strömkabeln inte passar till din bil.

ATENÇÃO

Os conectores de corrente auxiliares podem variar de carro para carro. Não se esqueça de verificar o diagrama de ligação de corrente fornecido com o aparelho. As ligações mal executadas podem danificar o seu carro. Se não puder utilizar o cabo de alimentação fornecido no seu carro, contacte o agente Sony da sua zona.

Pin Pin Pol Pino	Colour Color Färg Cor	Function Función Funktion Função	Pin Pin Pol Pino	Colour Color Färg Cor	Function Función Funktion Função
1	Purple Púrpura	+; Speaker, Rear, Right +; Altavoz, trasero, derecho +; Högtalare, bakre, höger +; Altifalante, Parte de trás, Direito	5	White Blanco Vit Branco	+; Speaker, Front, Left +; Altavoz, delantero, izquierdo +; Högtalare, främre, vänster +; Altifalante, Parte da frente, Esquerdo
2	Mörklila Violeta	-; Speaker, Rear, Right -; Altavoz, trasero, derecho -; Högtalare, bakre, höger -; Altifalante, Parte de trás, Direito	6		-; Speaker, Front, Left -; Altavoz, delantero, izquierdo -; Högtalare, främre, vänster -; Altifalante, Parte da frente, Esquerdo
3	Gray Gris	+; Speaker, Front, Right +; Altavoz, delantero, derecho +; Högtalare, främre, höger +; Altifalante, Parte da frente, Direito	7	Green Verde Grön Verde	+; Speaker, Rear, Left +; Altavoz, trasero, izquierdo +; Högtalare, bakre, vänster +; Altifalante, Parte de trás, Esquerdo
4	Grau Cinza	-; Speaker, Front, Right -; Altavoz, delantero, derecho -; Högtalare, främre, höger -; Altifalante, Parte da frente, Direito	8		-; Speaker, Rear, Left -; Altavoz, trasero, izquierdo -; Högtalare, bakre, vänster -; Altifalante, Parte de trás, Esquerdo

Negative polarity positions 2, 4, 6 and 8 have striped cords.
Las posiciones de polaridad negativa 2, 4, 6 y 8 tienen cables con raya.
De negativa polpositionerna 2, 4, 6 och 8 har randiga kablar.
As posições 2, 4, 6 e 8 (polaridade negativa) têm cabos às riscas.

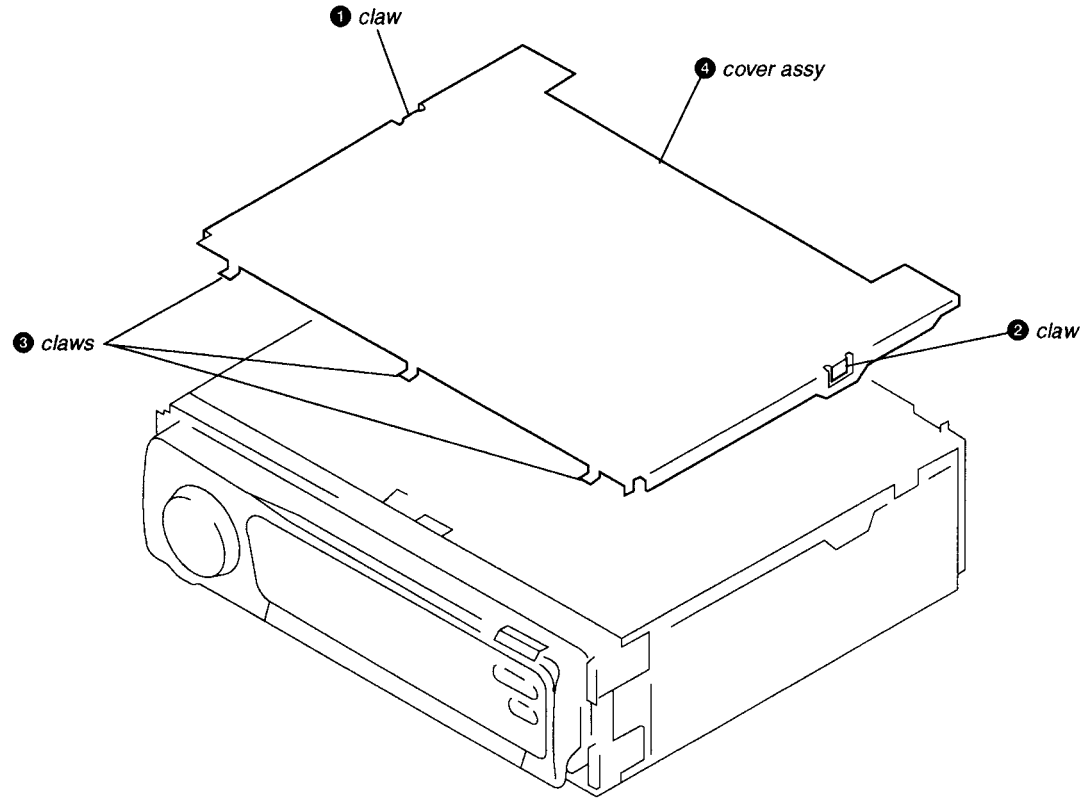
Pin Pin Pol Pino	Colour Color Färg Cor	Function Función Funktion Função	Pin Pin Pol Pino	Colour Color Färg Cor	Function Función Funktion Função
4	Yellow Amarillo Gul Amarello	continuous power supply suministro de alimentación continua kontinuerlig strömförsörjning alimentação ininterrupta de corrente	7	Red Rojo Rôt Vermelho	switched power supply suministro de alimentación conmutado switchad strömförsörjning afornecimento comutado de corrente
5	Blue Azul Blå Azul	power aerial control control de antena eléctrica motorizada elektrisk seriell antena eléctrica	8	Black Negro Svart Preto	ground toma de tierra jord Terra
6	Orange/white striped Con raya naranja/blanca Orange-och vitrandig Com riscas cor de laranja e brancas	switched illumination power supply suministro de alimentación de iluminación conmutada strömförsörjning till belysning (växlad) Fonte de fornecimento de iluminação comutada			

Positions 1, 2, and 3 do not have pins.
Las posiciones 1, 2 y 3 no disponen de pines.
Positionerna 1, 2 och 3 saknar stift.
As posições 1, 2 e 3 não têm pinos.

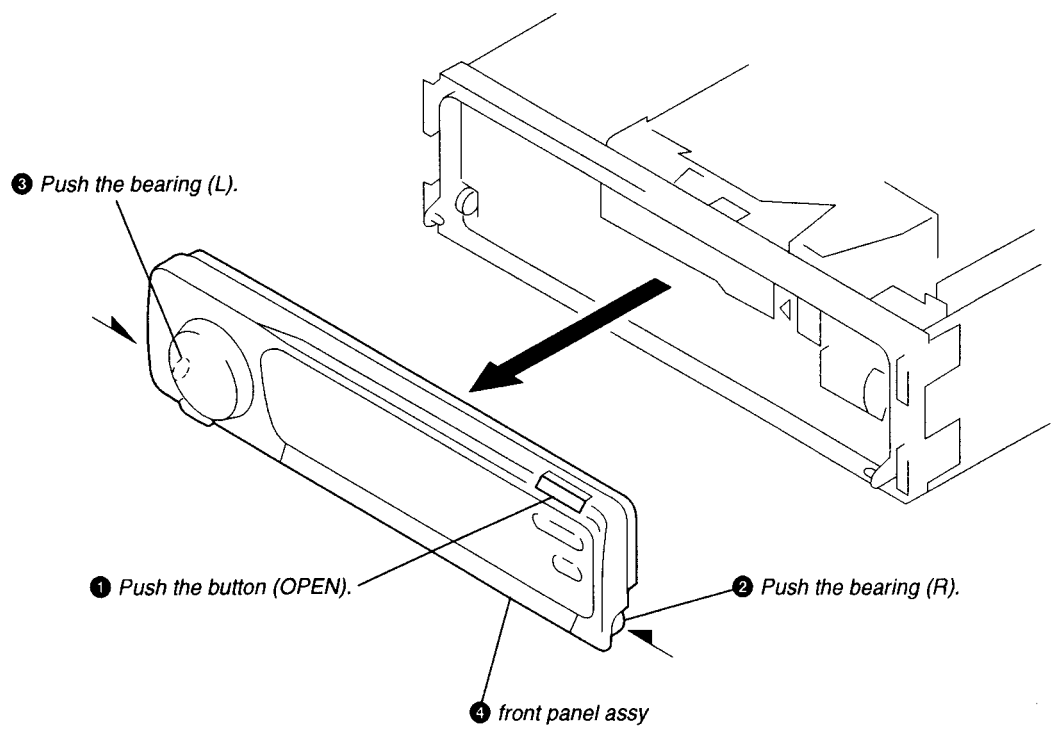
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

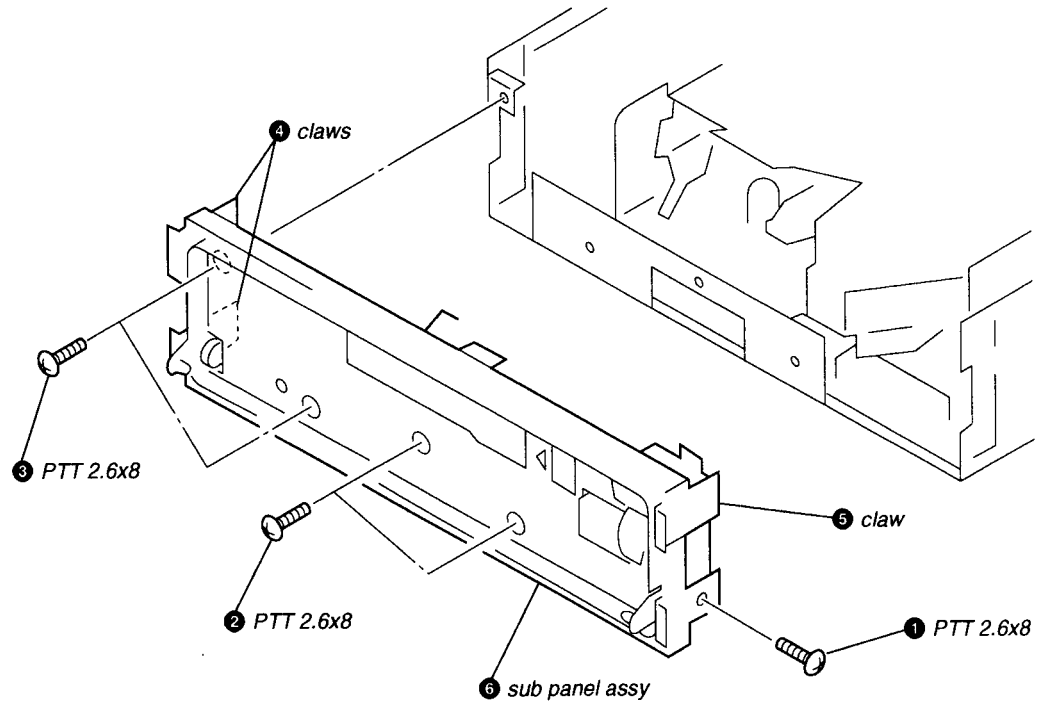
2-1. COVER ASSY



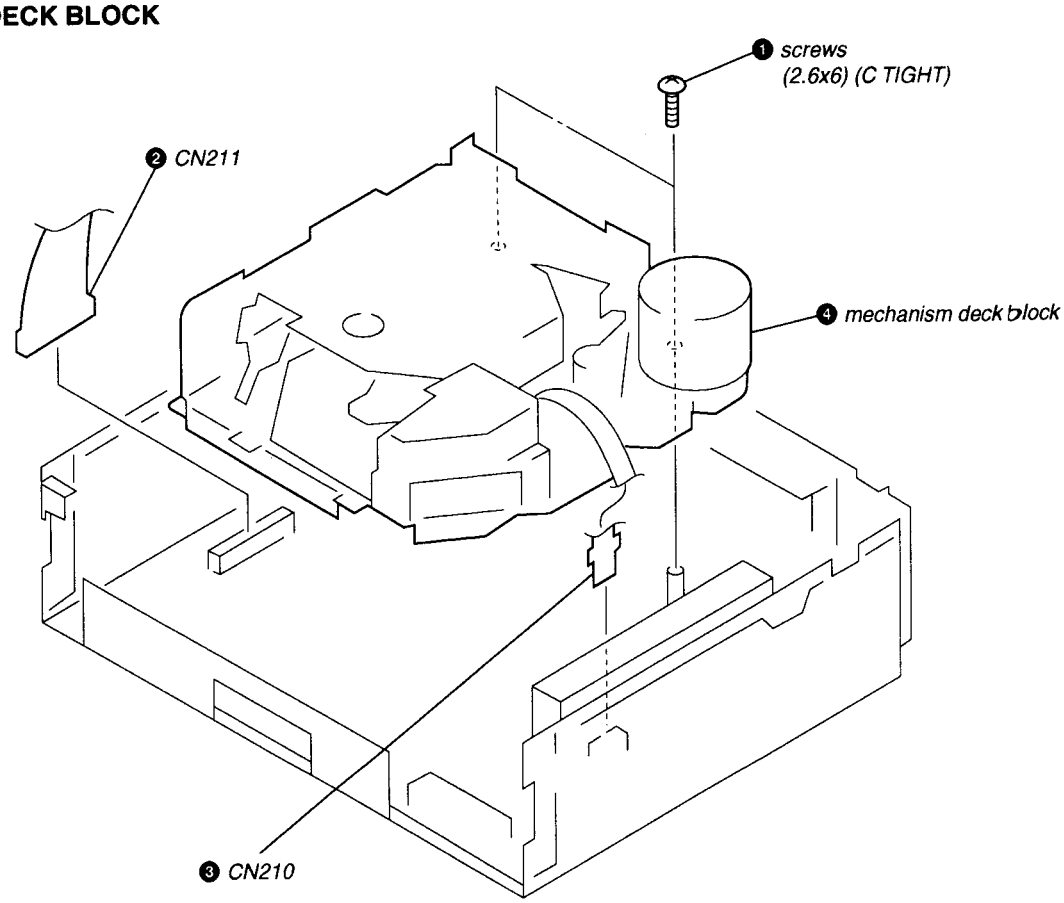
2-2. FRONT PANEL ASSY



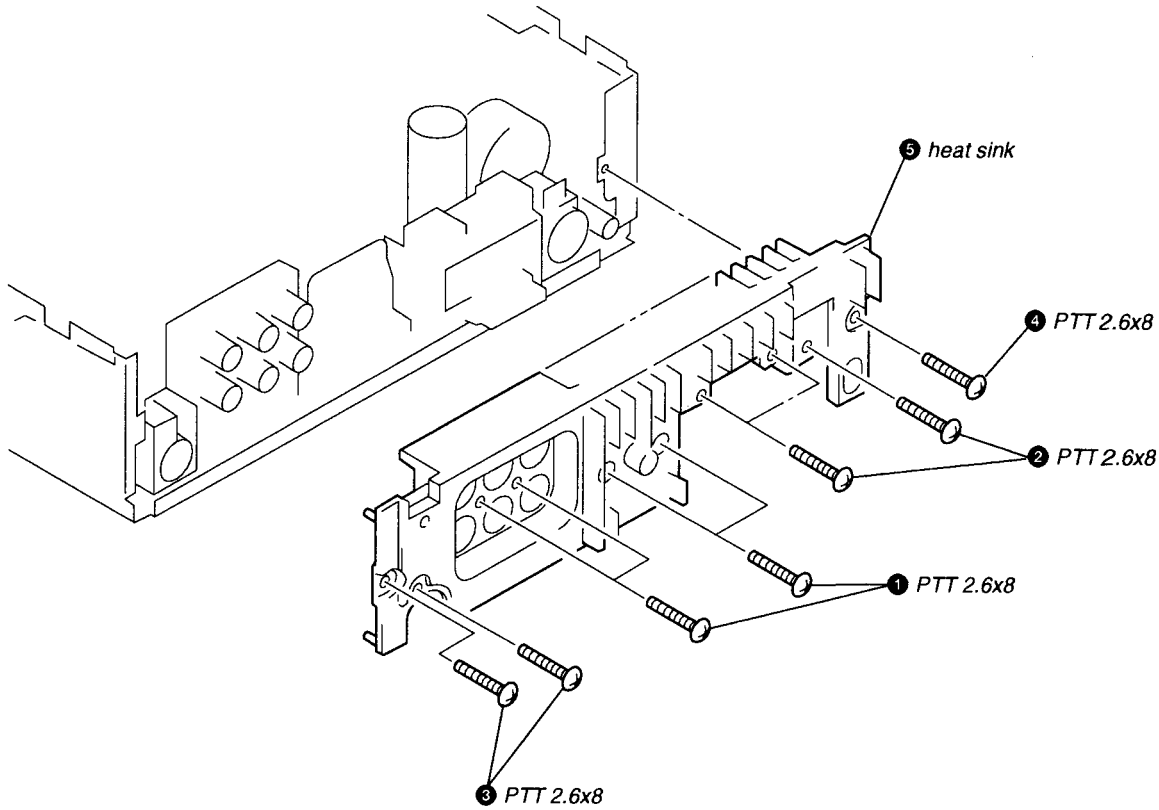
2-3. SUB PANEL ASSY



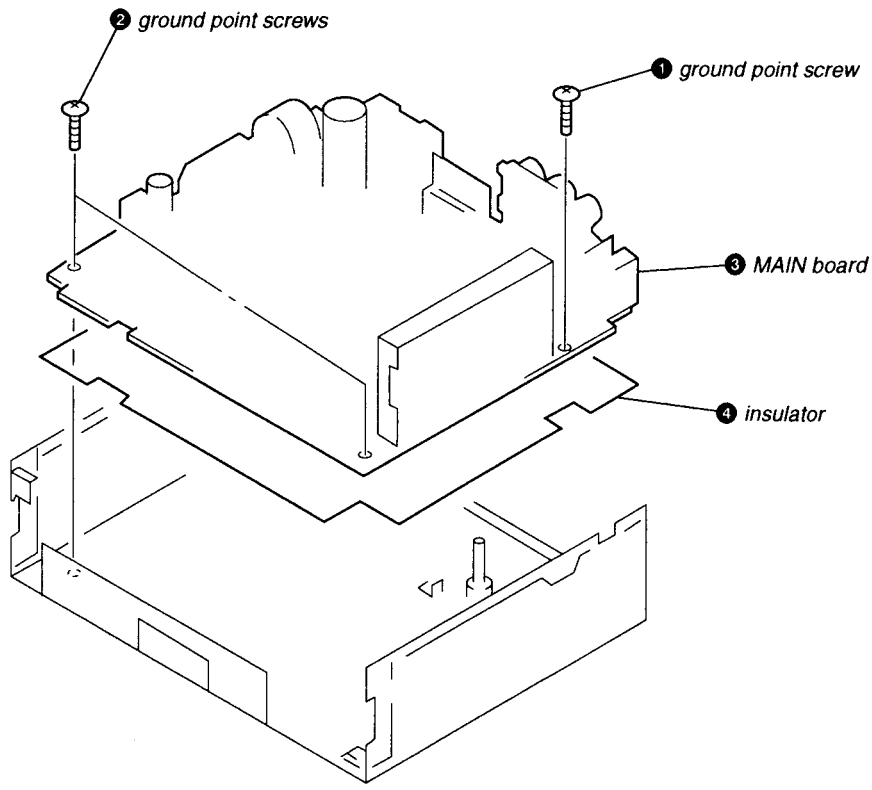
2-4. MECHANISM DECK BLOCK



2-5. HEAT SINK



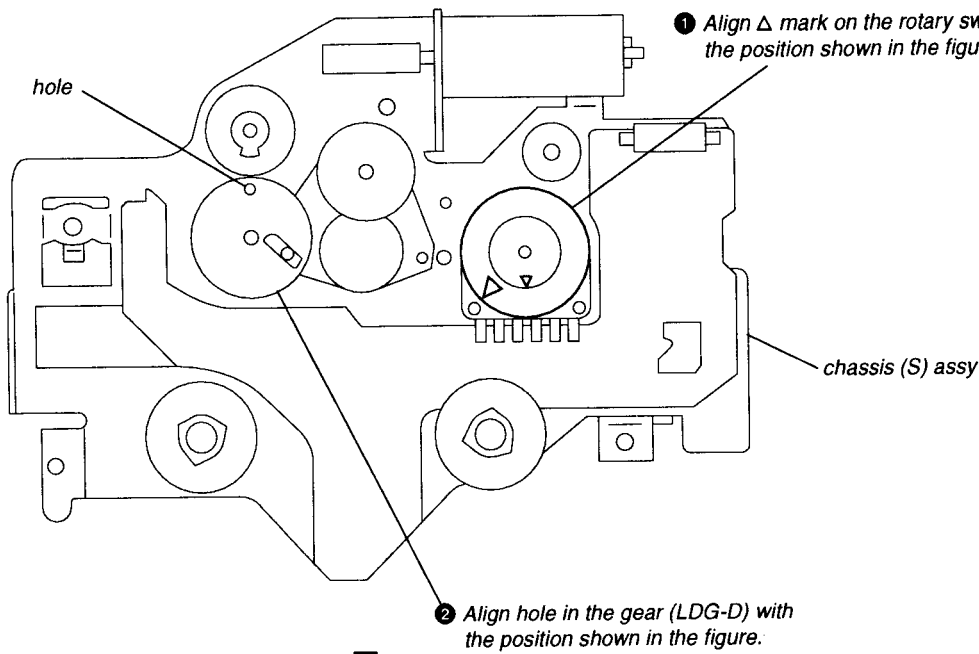
2-6. MAIN BOARD



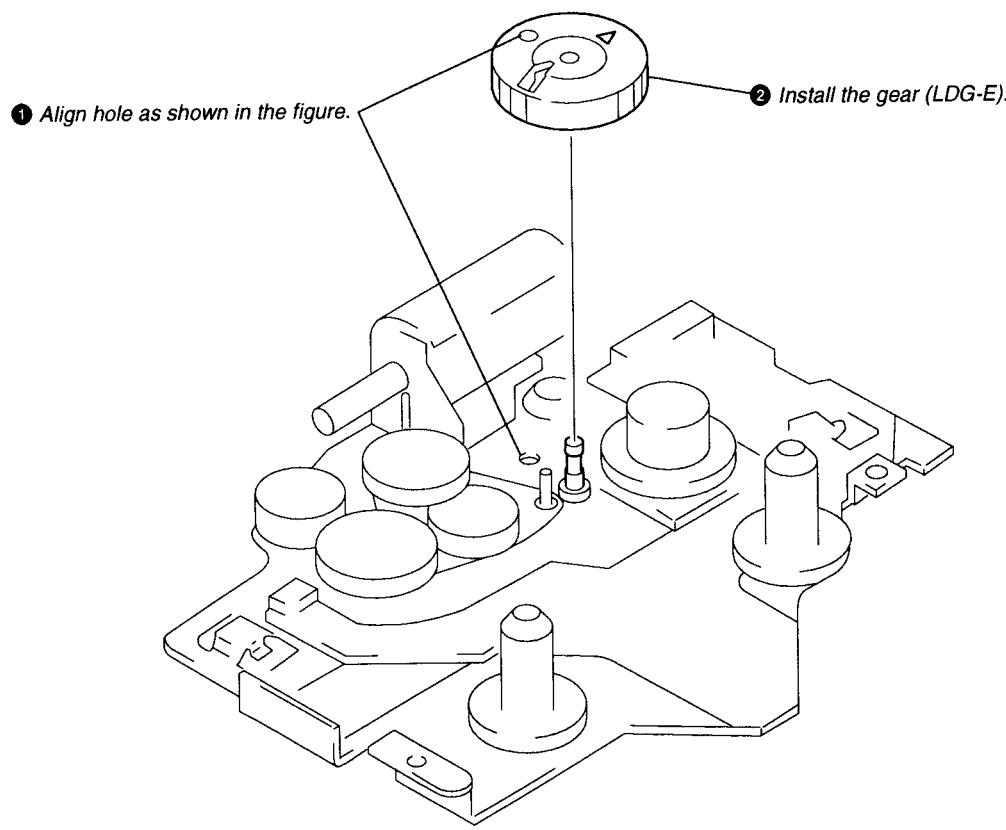
SECTION 3
ASSEMBLY OF MECHANISM DECK

Note : Follow the assembly procedure in the numerical order given.

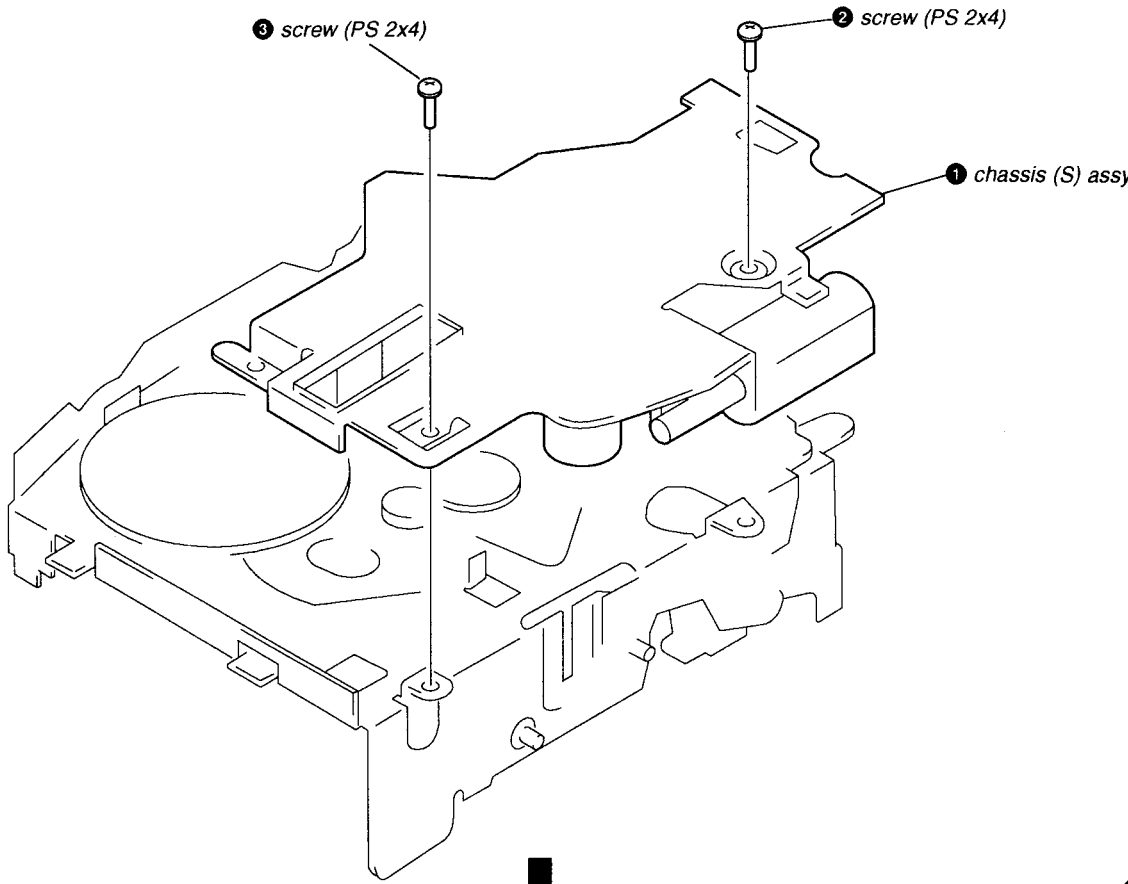
ALIGNMENT OF ROTARY SWITCH


❶ Align △ mark on the rotary switch the position shown in the figure.
hole
chassis (S) assy
❷ Align hole in the gear (LDG-D) with the position shown in the figure.

GEAR (LDG-E)

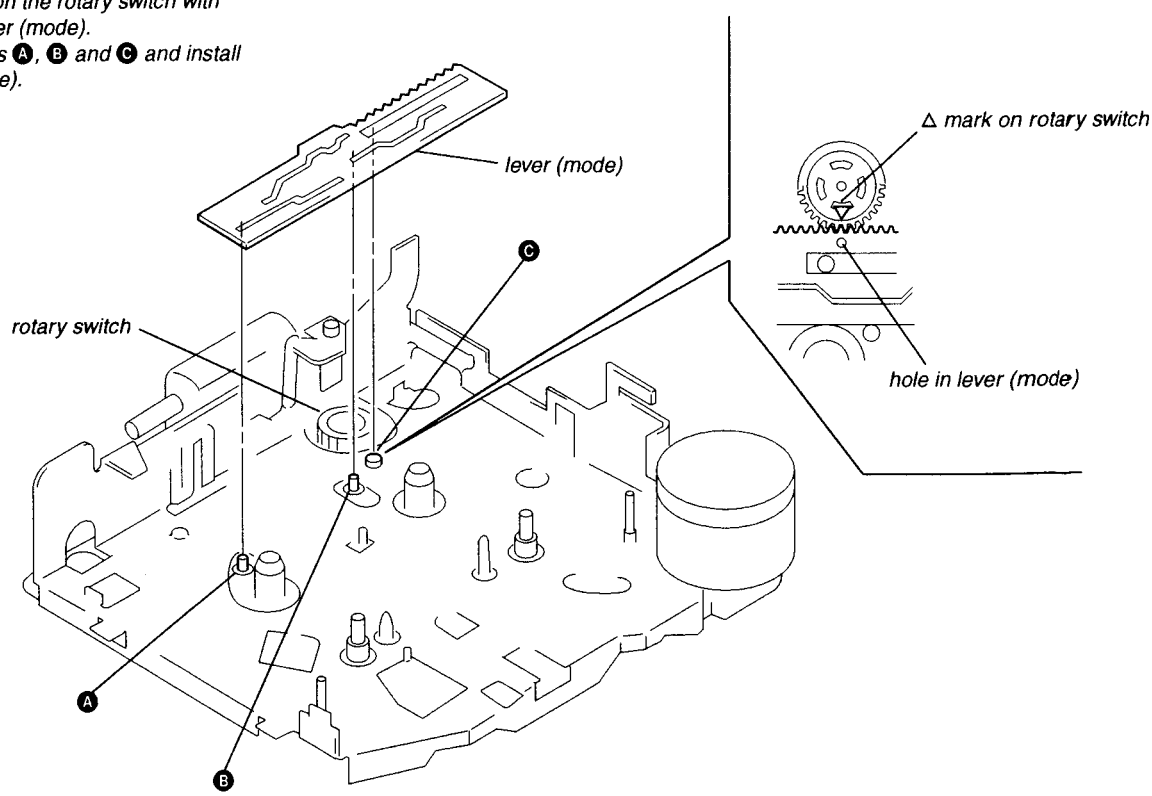


CHASSIS (S) ASSY

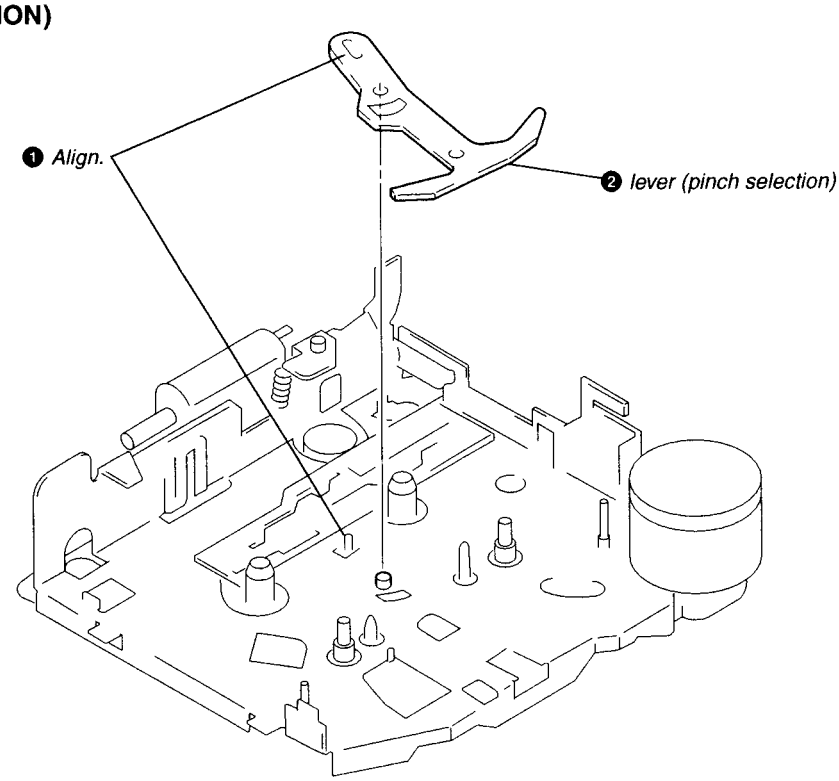


LEVER (MODE)

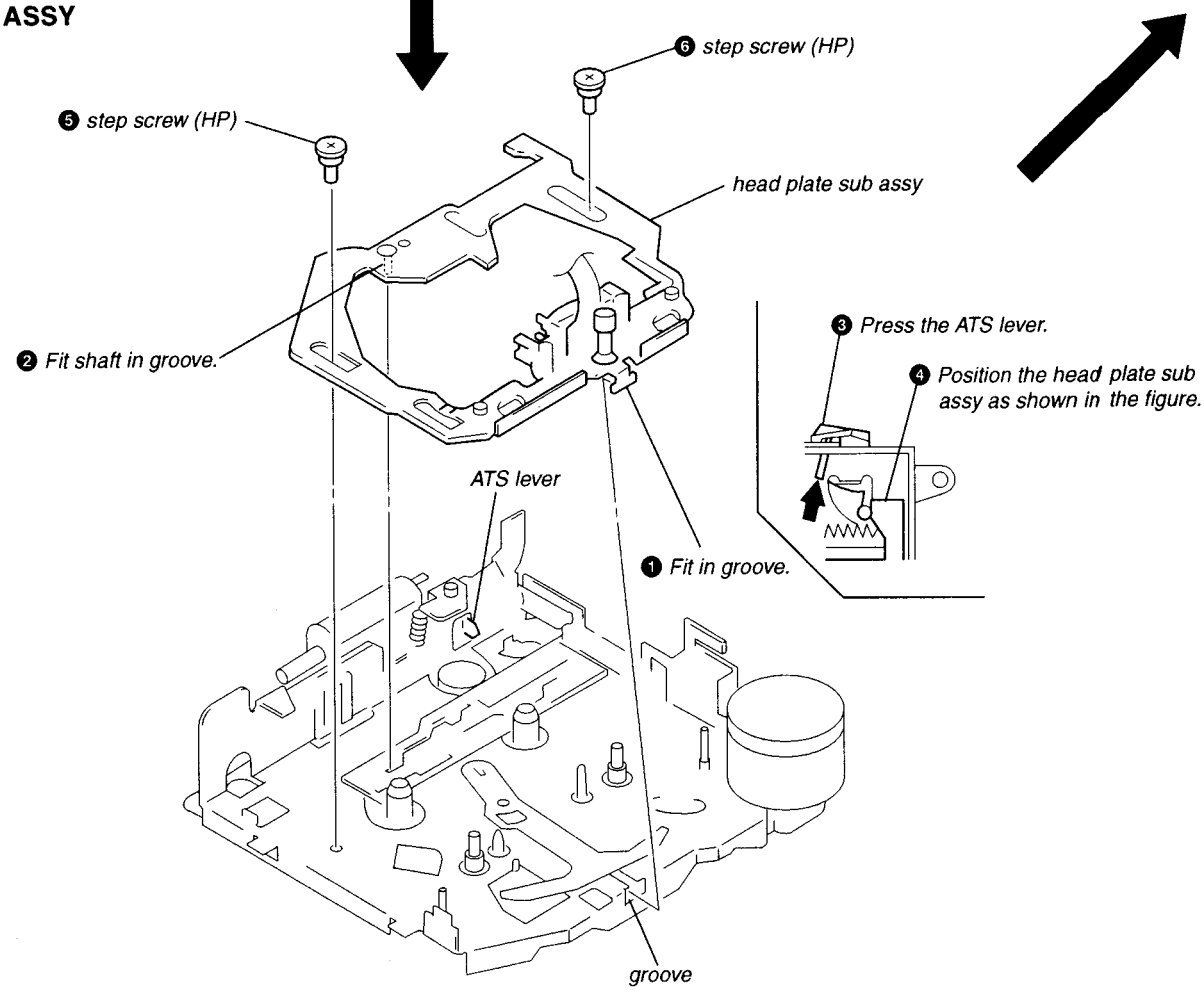
1. Align △ mark on the rotary switch with hole in the lever (mode).
2. Fit on positions ❹, ❸ and ❷ and install the lever (mode).



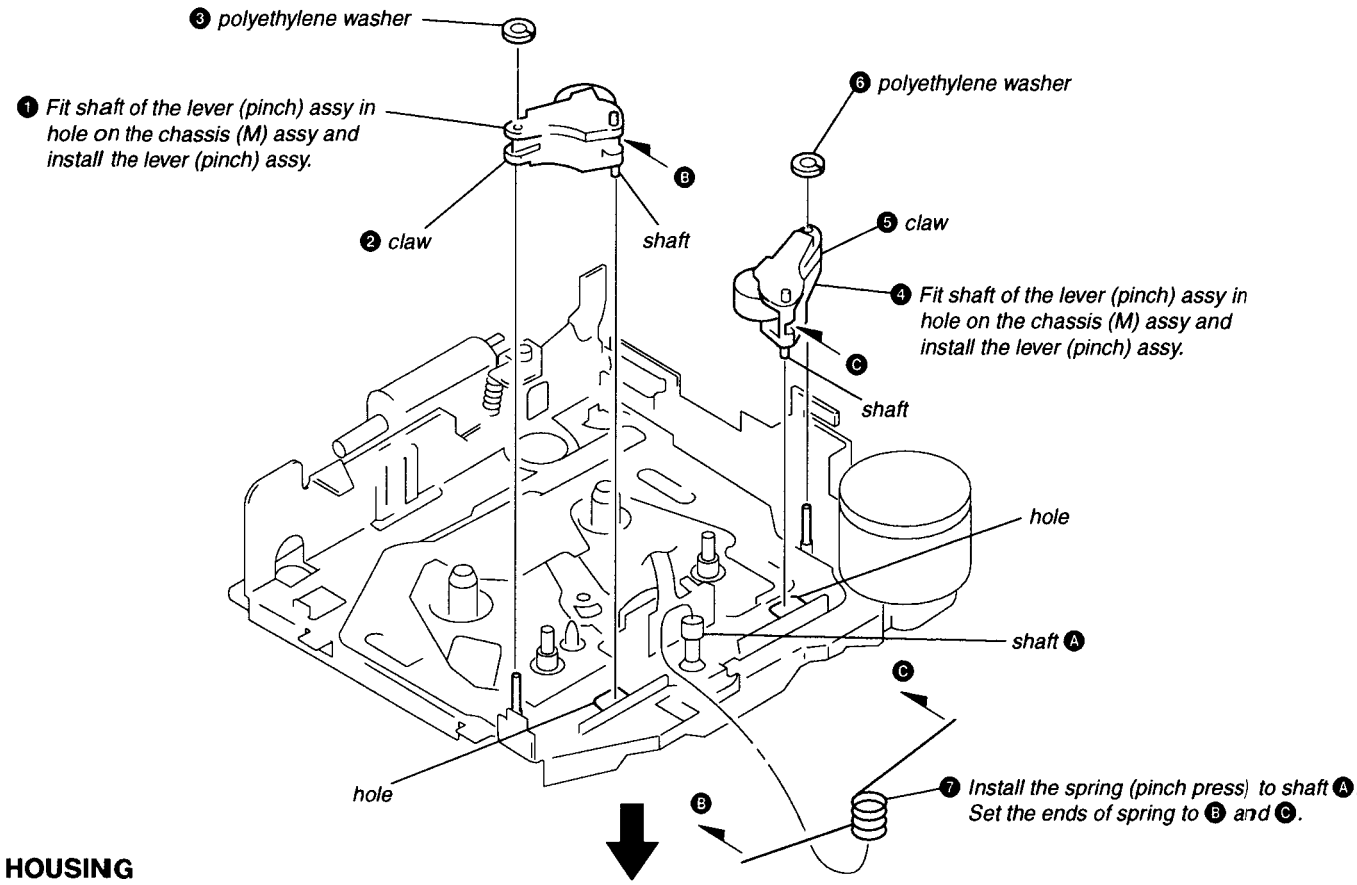
LEVER (PINCH SELECTION)



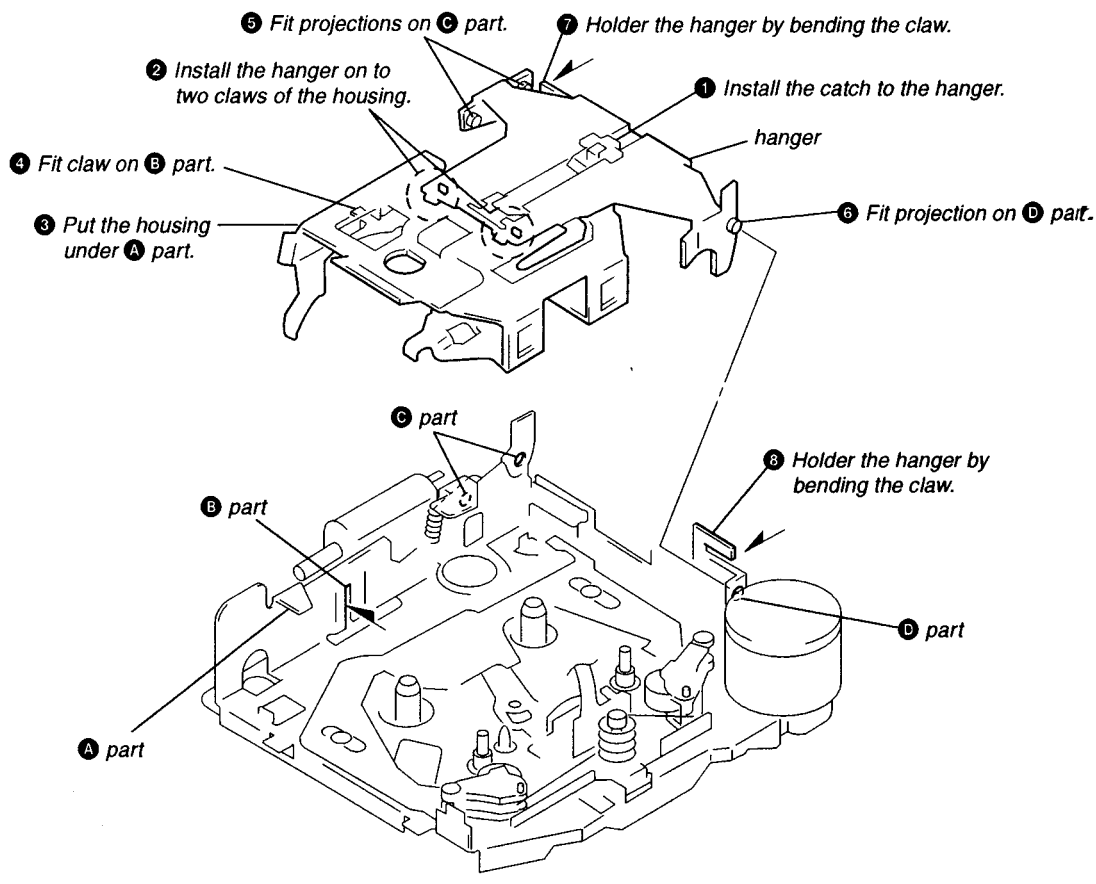
HEAD PLATE ASSY


❻ step screw (HP)
❺ step screw (HP)
head plate sub assy
❷ Fit shaft in groove.
❸ Press the ATS lever.
❹ Position the head plate sub assy as shown in the figure.
ATS lever
❶ Fit in groove.
groove

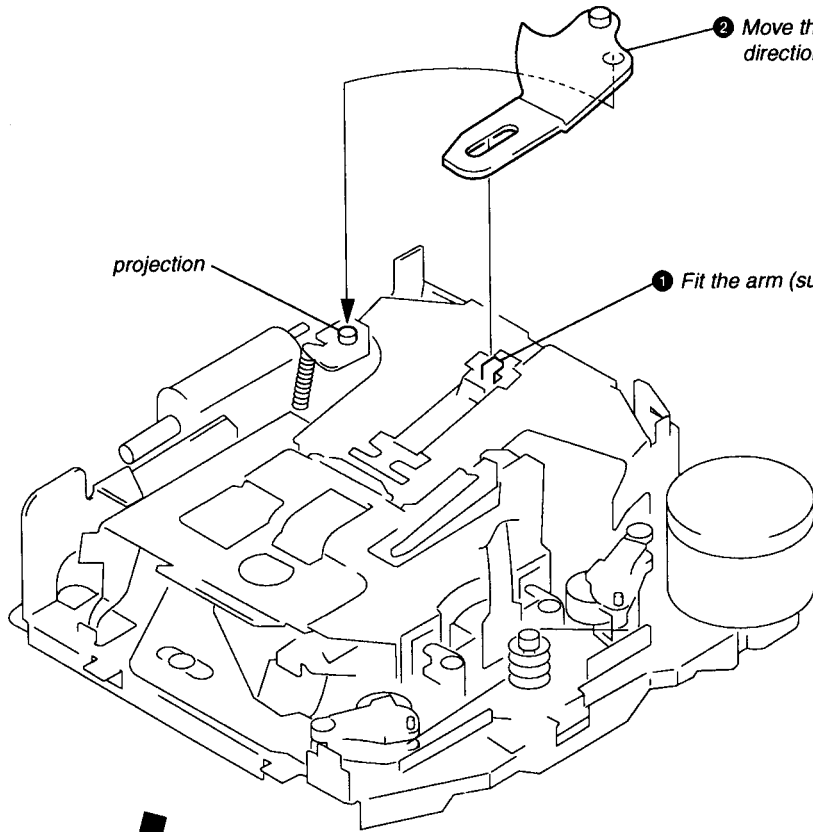
LEVER (PINCH) ASSY


❸ polyethylene washer
❶ Fit shaft of the lever (pinch) assy in hole on the chassis (M) assy and install the lever (pinch) assy.
❷ claw
shaft
Ⓑ
❻ polyethylene washer
❺ claw
❹ Fit shaft of the lever (pinch) assy in hole on the chassis (M) assy and install the lever (pinch) assy.
Ⓒ
shaft
hole
shaft Ⓐ
Ⓒ
hole
Ⓑ
❼ Install the spring (pinch press) to shaft Ⓐ. Set the ends of spring to Ⓑ and Ⓒ.

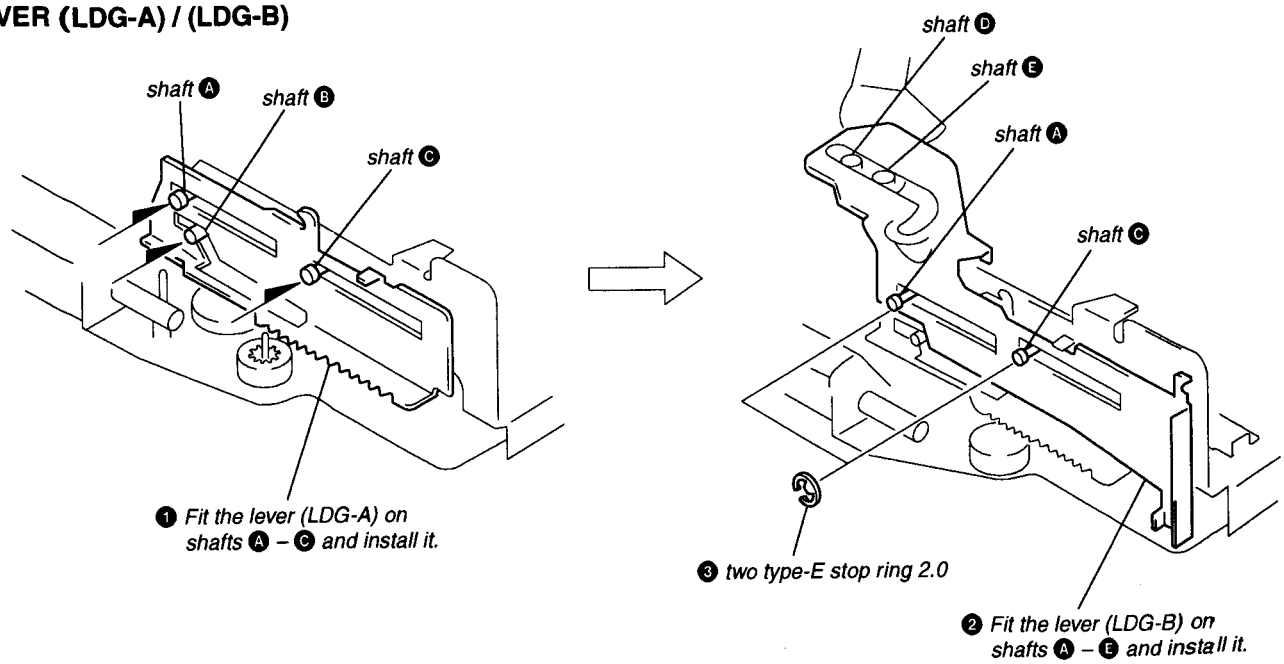
HOUSING


❺ Fit projections on Ⓒ part.
❼ Holder the hanger by bending the claw.
❷ Install the hanger on to two claws of the housing.
❶ Install the catch to the hanger.
hanger
❹ Fit claw on Ⓑ part.
❸ Put the housing under Ⓐ part.
❻ Fit projection on Ⓓ part.
Ⓒ part
❽ Holder the hanger by bending the claw.
Ⓑ part
Ⓓ part
Ⓐ part

ARM (SUCTION)



LEVER (LDG-A) / (LDG-B)


shaft Ⓐ
shaft Ⓑ
shaft Ⓒ
❶ Fit the lever (LDG-A) on shafts Ⓐ – Ⓒ and install it.
shaft Ⓓ
shaft Ⓔ
shaft Ⓐ
shaft Ⓒ
❸ two type-E stop ring 2.0
❷ Fit the lever (LDG-B) on shafts Ⓐ – Ⓔ and install it.

SECTION 4
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Wipe the following components with an absorbent cotton cloth moistened with alcohol before adjustment :
   PB head　　Pinch roller
   Idler　　Rubber belt
   Capstan
2. Demagnetize the PB head using a head demagnetizer.
3. Be careful not to use a magnetized screwdriver.
4. After the adjustment is completed, lock the adjustment parts using screws.
5. Unless otherwise specified, make adjustments at the specified voltage (14.4 V).

Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	35 – 65 g • cm (0.49 – 0.90 oz • inch)
FWD Back Tension		0.5 – 5.0 g • cm (0.01 – 0.07 oz • inch)
REV	CQ-102RC	35 – 65 g • cm (0.49 – 0.90 oz • inch)
REV Back Tension		0.5 – 5.0 g • cm (0.01 – 0.07 oz • inch)
FF, REW	CQ-201B	60 – 200 g • cm (0.83 – 2.78 oz • inch)

Tape Tension Measurement

Mode	Tension Meter	Meter Reading
FWD	CQ-403A	more than 60 g (more than 2.12 oz)
REV	CQ-403R	

SECTION 5
ELECTRICAL ADJUSTMENTS

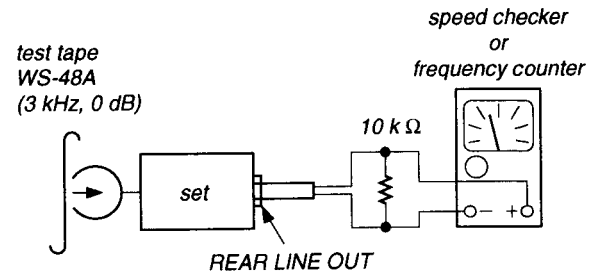
See the adjustment location from on page 26 for the adjustment.

DECK SECTION　**0 dB = 0.775 V**

Tape Speed Adjustment

Procedure :

1. Put the set into the FWD PB mode.



Specification : Constant speed

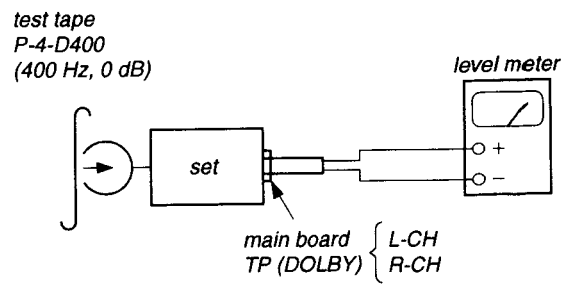
Speed checker	Frequency counter
– 1.5 to + 2.5 %	2,955 to 3,075 Hz

Adjustment Location : See page 26.

DOLBY Level Adjustment

setting :

SHIFT button	: ON (light up SET UP and PLAY MODE)
Preset [3] (PLAY MODE) button	: NR off
SOUND (BAS) button	: Center
SOUND (TRE) button	: Center
SOUND (BAL) button	: Center
SOUND (FAD) button	: Center
SOUND (VOL) button	: Maximum

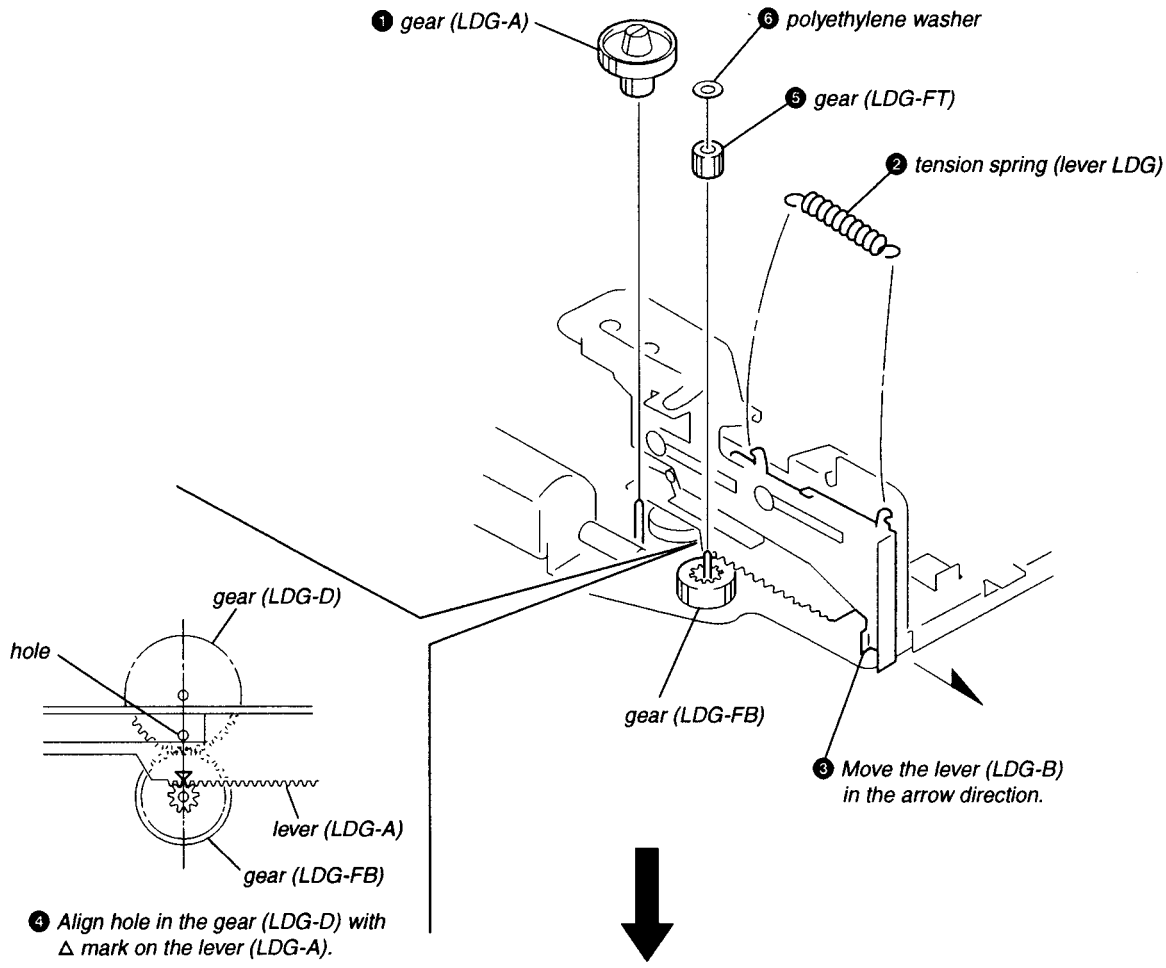


Procedure :

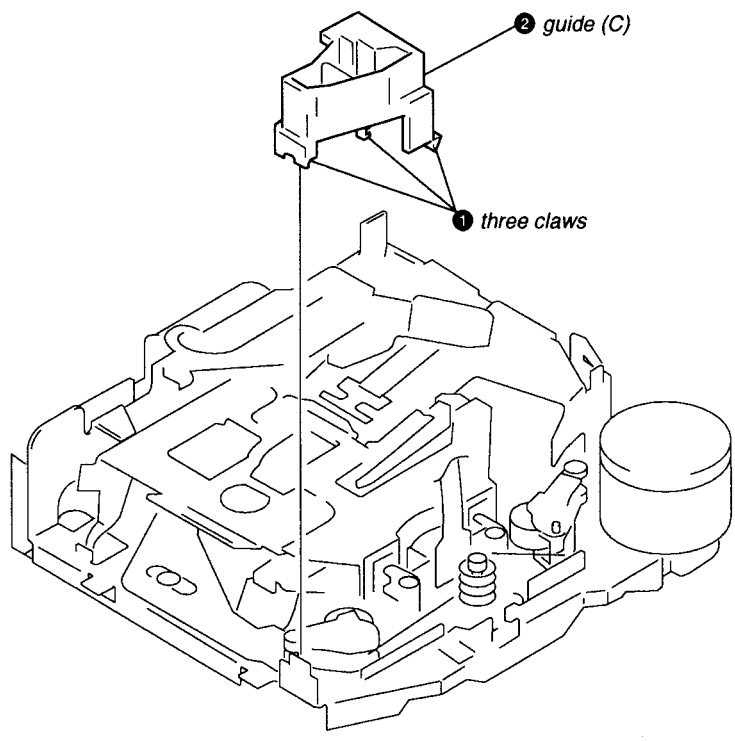
1. Put the set into the FWD PB mode.
2. Adjust RV231 (L-CH) and RV241 (R-CH) so that level meter reading is – 6 ± 1 dB (0.35 to 0.44 V).

Adjustment Location : See page 26.

GEAR (LDG-FT)


❶ gear (LDG-A)
❻ polyethylene washer
❺ gear (LDG-FT)
❷ tension spring (lever LDG)
gear (LDG-D)
hole
lever (LDG-A)
gear (LDG-FB)
gear (LDG-FB)
❸ Move the lever (LDG-B) in the arrow direction.
❹ Align hole in the gear (LDG-D) with △ mark on the lever (LDG-A).

GUIDE (C)



TUNER SECTION **0 dB = 1 µV**

Cautions during repair

When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/ Stop Level and MW Auto Scan/Stop Level adjustments can be performed easier than it in ordinary procedure.

<Set the Test Mode>

1. Set the "OFF" mode.
2. Push the preset [4] button.
3. Push the preset [5] button.
4. Press the preset [1] button for more than two seconds.
5. Then the display indicates all lights, the test mode is set.

<Release the Test Mode>

1. Push the [OFF] button.

Note on Adjustment

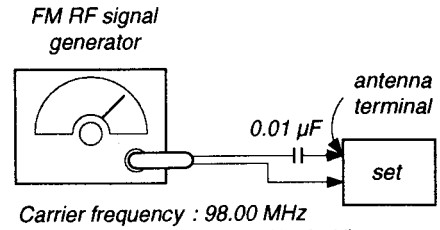
The adjustments of tuner section, should be performed according to the following sequence.

1. FM Auto Scan/Stop Level Adjustment
2. FM Stereo Separation Adjustment
3. FM Noise Focus Adjustment
4. FM RDS S-Meter Adjustment
5. MW Auto Scan/Stop Level Adjustment

FM Auto Scan/Stop Level Adjustment

Setting :

SOURCE button : FM

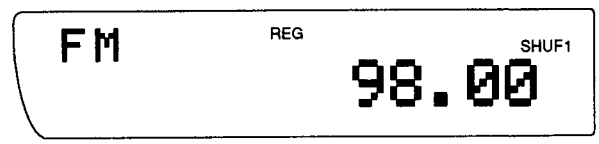


Carrier frequency : 98.00 MHz
Output level : 22 dB (12.6 µV)
Mode : mono
Modulation : 1 kHz, 22.5 kHz deviation (30%)

Procedure :

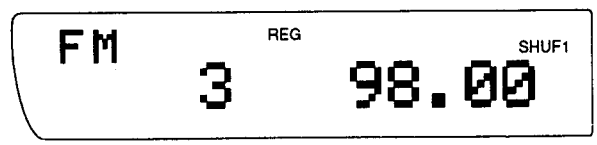
1. Set to the test mode.
2. Push the [SOURCE] button and set to FM.

Display



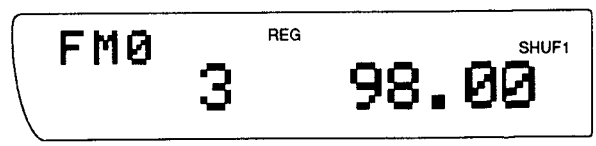
3. Push the preset [3] button.

Display



4. Adjust with the volume RV2 on TU10 so that the "FM" indication turns to "FM0" indication on the display window.
   But, in case of already indicated "FM0", turn the RV2 so that put out light "0" indication and adjustment.

Display

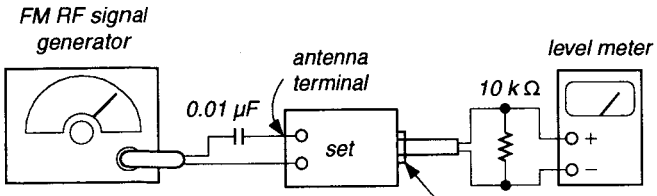


Adjustment Location : See page 26.

FM Stereo Separation Adjustment

Setting :

SOURCE button : FM



Carrier frequency : 98.00 MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main : 1 kHz, 20 kHz deviation (26.5%)
sub : 1 kHz, 20 kHz deviation (26.5%)
19 kHz pilot : 7.5 kHz deviation (10%)

Procedure :

FM stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV4 on TU10 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV4 on TU10 for minimum reading.

L-CH stereo separation : Ⓐ – Ⓑ
R-CH stereo separation : Ⓒ – Ⓓ
The separations of both channels should be equal.

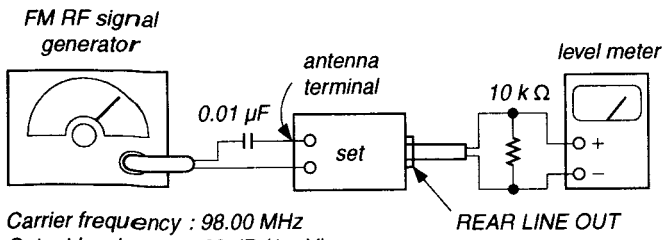
Specification : Separation more than 26 dB

Adjustment Location : See page 26.

FM Noise Focus Adjustment

Setting :

SOURCE button : FM



Carrier frequency : 98.00 MHz
Output level : 60 dB (1 mV)
Mode : mono
Modulation : 1 kHz, 75 kHz deviation (100%)

Procedure :

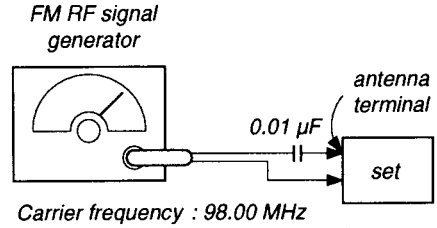
1. Tune the 98.00 MHz.
2. The then output level is supposing that 0 dB.
3. Adjust with the volume RV3 on TU10 so that the output level is – 32 ± 2 dB then signal generator input set to – 20 dB.

Adjustment Location : See page 26.

FM RDS S-Meter Adjustment

Setting :

SOURCE button : FM

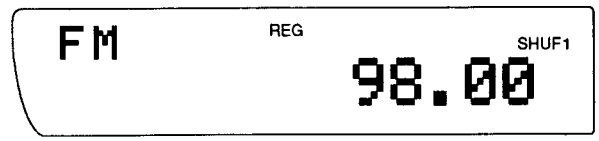


Carrier frequency : 98.00 MHz
Output level : 35 dB (56.2 µV)
Mode : mono
Modulation : no modulation

Procedure :

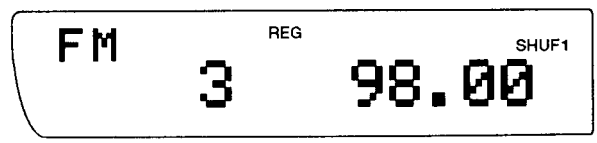
1. Set to the test mode. (See page 23.)
2. Push the [SOURCE] button and set to FM.

Display



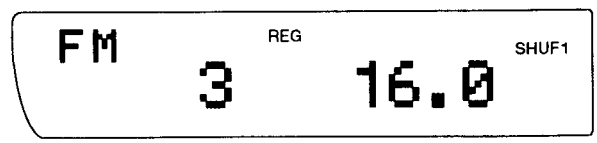
3. Push the preset [3] button.

Display



4. Push the preset [10] button.
5. Adjust RV110 so that the display indication is "16.0".

Display



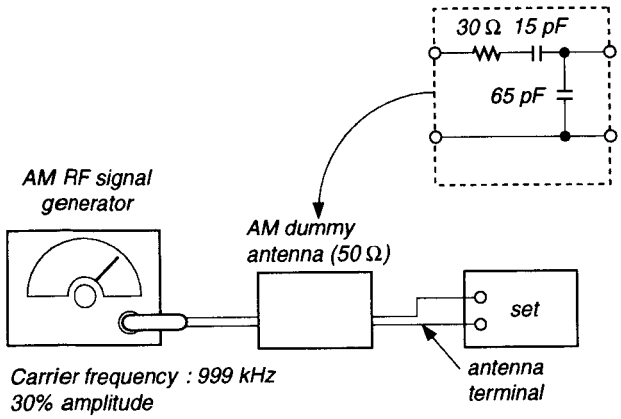
Specification : Display indication : 15.8 to 16.2.

Adjustment Location : See page 26.

MW Auto Scan/Stop Level Adjustment

Setting :

SOURCE → MODE button : MW

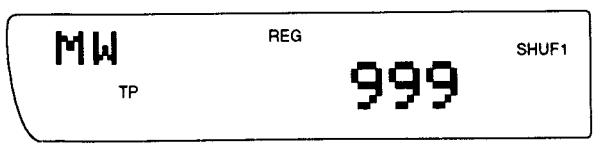


Carrier frequency : 999 kHz
30% amplitude modulation by 1 kHz signal
output level : 33 dB (44.7 μV)

Procedure :

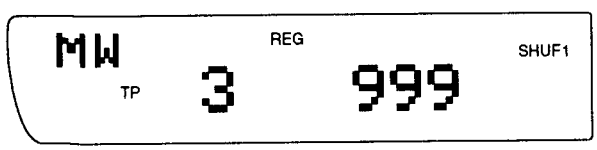
1. Set to the test mode. (See page 23.)
2. Push the [SOURCE] button.
3. Push the [MODE] button and set to MW.

Display



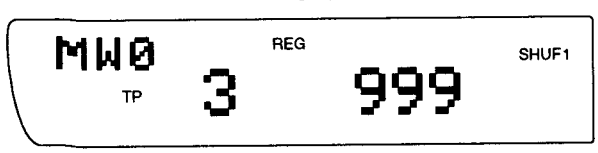
4. Push the preset [3] button.

Display



5. Adjust with the volume RV1 on TU10 so that the "MW" indication turns to "MW0" indication on the display window. But, in case of already indicated "MW0", turn the RV1 so that put out light "0" indication and adjustment.

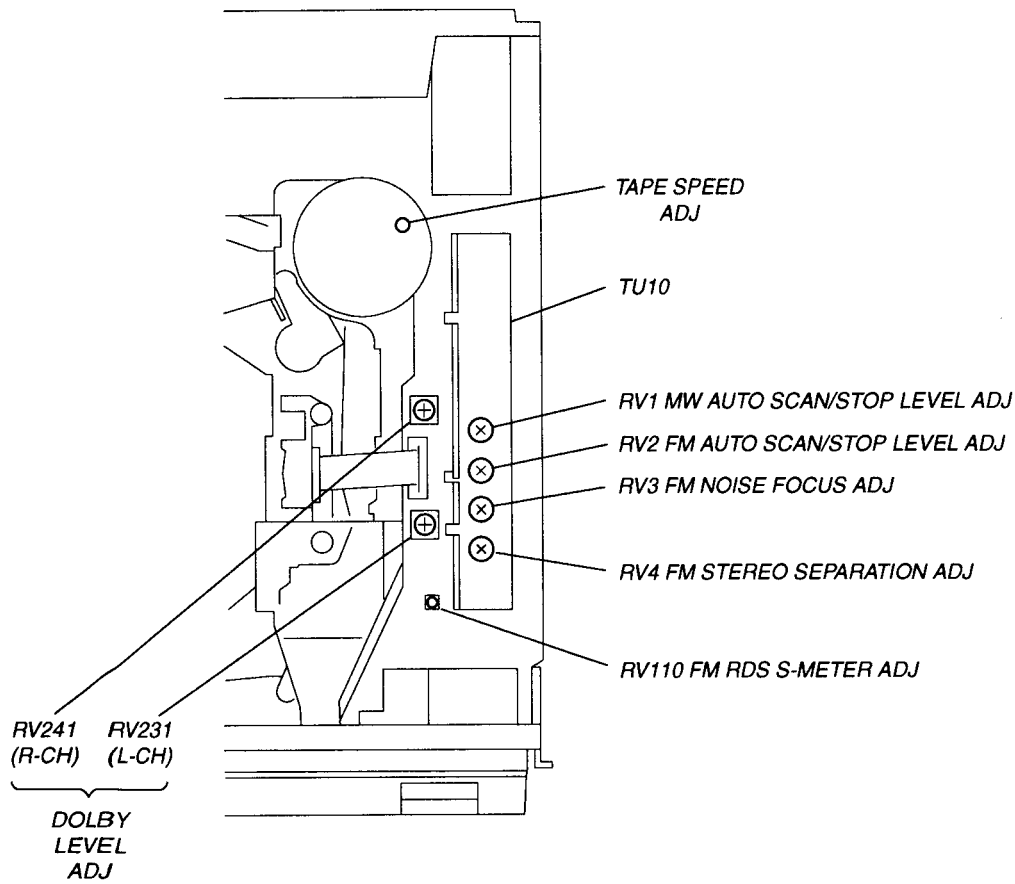
Display



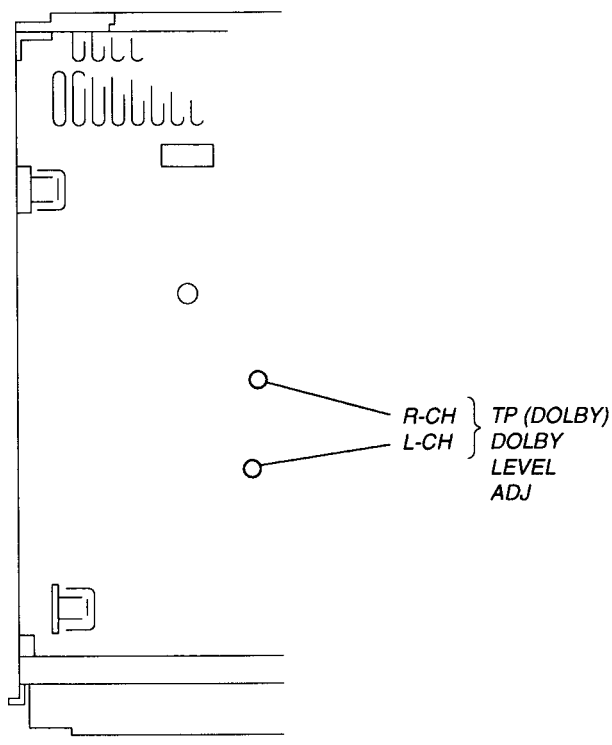
Adjustment Location : See page 26.

Adjustment Location : tuner unit (TU10)

–set upper view–



–set bottom view–



SECTION 6
DIAGRAMS

6-1. IC PIN DESCRIPTIONS

• IC101 MN1884820Y5F (TUNER SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Pin Description
1 – 6	—	—	Not used.
7	VDD	—	Power supply pin
8	X1	I	Ceramic oscillator connection input pin (8 MHz)
9	X2	O	Ceramic oscillator connection output pin (8 MHz)
10	GND	—	GND
11	XI	I	Connect to GND.
12	—	—	Not used.
13	XO	—	Connect to GND.
14	RESET	I	Reset input pin
15	RDSCKI	I	RDS clock input pin
16	BU IN	I	Back-up detection input pin
17	BUSON	I	Bus interface bus on input pin
18 – 21	POS3 – POS0	I	Position signal detection input pin
22	—	—	Connect to GND.
23	MTLIN	I	Auto metal detection input pin
24	AMSIN	I	At AMS, music with/without detection input pin
25	TAPIN	I	Connect to GND.
26	DOLON	I/O	DOLBY control input/output pin
27	—	—	Not used.
28	TAPMUT	O	TAPE mute control output pin
29	MTLON	O	METAL control output pin
30	RDSSI	I	RDS data input pin
31	—	—	Connect to GND.
32	CM-ON	O	Capstan motor control output pin
33	TAP-ON	O	TAPE power control output pin
34	LMEJ	O	Loading motor control output pin (Eject direction)
35	LMLOD	O	Loading motor control output pin (Loading direction)
36	—	—	Connect to GND.
37	REEL	I	Rotation detection input pin of reel table.
38	PLL-DI	I	PLL data input pin
39	PLL-DO	O	PLL data output pin
40	PLL-CLK	O	PLL clock output pin
41	CE	O	PLL chip enable output pin
42	RQ	O	Bus interface request output pin
43	LINK-OFF	O	Bus interface link output pin
44	SCK	I	Bus interface serial clock-in input pin
45	SI	I	Bus interface serial data-in input pin
46	SO	I/O	Bus interface serial data-out input/output pin
47	VDD	—	Power supply pin
48	AVDD	—	Power supply pin for A/D conversion input.
49	VREF	—	Reference voltage input pin for A/D conversion input. (+ side)
50 – 52	—	I	Connect to GND.
53	MUTE-SEL	I	Connect to GND.
54, 55	DIST-SEL1, 0	I	Destination select setting pin (Fixed at "L" .)
56	S-METER(AM)	I	MW S-meter voltage detection input pin
57	S-METER(FM)	I	FM S-meter voltage detection input pin

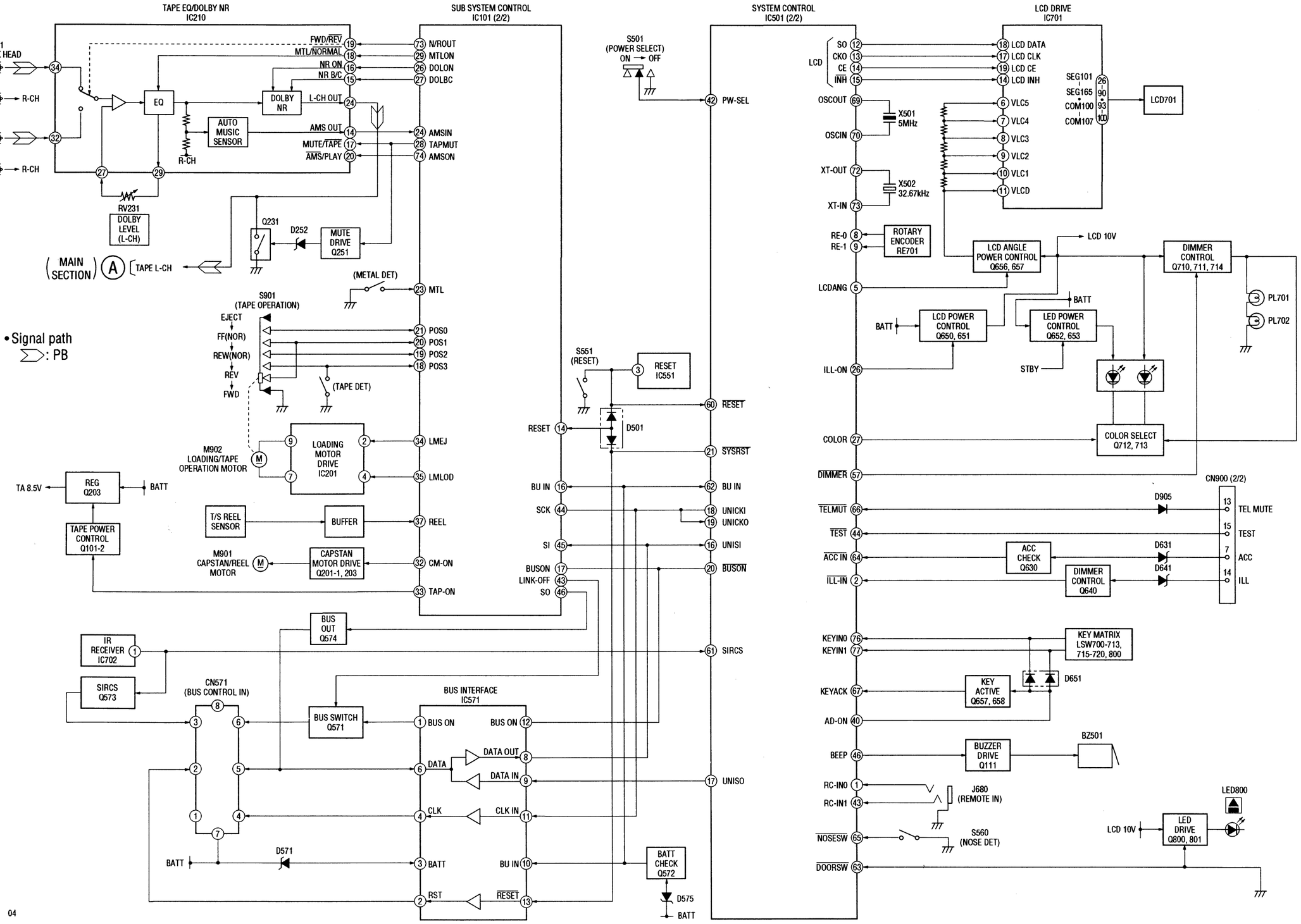
Pin No.	Pin Name	I/O	Pin Description
58 – 60	—	—	Connect to GND.
61	MODE2	O	TUNER-ON output pin
62	—	O	Not used.
63	RECEIVE	O	SEEK OUT output pin
64	AM-ON	O	AM-ON output pin
65	MODE1	O	FM-ON output pin
66	TUNER-MUTE	O	MUTE output pin
67	AF-SEEK	O	Connect to GND.
68	—	—	Not used.
69	—	O	Fixed at "H".
70	ST-IN/MONO	I/O	Used in conjunction with ST indicator input/MONO output.
71	SD-IN	I	Signal detecter input pin
72	—	—	Not used.
73	$\overline{\text{FWD}}$/REV	O	$\overline{\text{Forward}}$/Reverse detection output pin
74	AMSON	O	TAPE AMS control output pin
75 – 80	—	—	Not used.

Pin No.	Pin Name	I/O	Pin Description
60	$\overline{\text{RESET}}$	I	Reset input
61	SIRCS	I	Remote commander input
62	BU-IN	I	Back-up power detection input
63	$\overline{\text{DOORSW}}$	I	Door open/close switch
64	$\overline{\text{ACCIN}}$	I	Accessory power detection input
65	$\overline{\text{NOSESW}}$	I	Detachable panel detection input
66	$\overline{\text{TELMUT}}$	I	Telephone mute detection input
67	KEYACK	I	Key input acknowledge
68	VDD	—	Power supply for microcomputer.
69	OSCOUT	O	Main ceramic oscillator output pin (5 MHz)
70	OSCIN	I	Main ceramic oscillator input pin (5 MHz)
71	GND	—	GND for microcomputer.
72	XT-OUT	O	Sub crystal oscillator output pin (32.768 kHz)
73	XT-IN	I	Sub crystal oscillator input pin (32.768 kHz)
74	AVDD	—	Power supply for A/D conversion.
75	AVREF	—	Reference power supply for A/D conversion.
76, 77	KEYIN0, 1	I	Key input 0, 1
78, 79	KEYSEL0, 1	I	Key function select setting input 0, 1
80	DESTSEL	I	Fixed at "L".

• **IC501 μPD78058GC-462-3B9 (SYSTEM CONTROL)**

Pin No.	Pin Name	I/O	Pin Description
1	RC-IN0	I	Rotary commander A/D conversion input 0
2	$\overline{\text{ILL-IN}}$	I	Illumination line detection input
3	NIL	I	Connect to GND.
4	AVSS	—	GND for A/D conversion.
5	LCDANG	O	Output for LCD view angle adjustment.
6	NIL	I	Connect to GND.
7	AVREF	—	Reference voltage for D/A conversion.
8	RE-0	I	Rotary encoder input 0
9	RE-1	I	Rotary encoder input 1
10	SUB-F	O	Connect to GND.
11	COLSEL	O	Connect to GND.
12	LCDSO	O	LCD serial data output
13	LCDCKO	O	LCD serial clock output
14	LCDCE	O	LCD serial chip enable output
15	$\overline{\text{LCDINH}}$	O	LCD blank display control output
16	UNISI	I	Serial data input
17	UNISO	O	Serial data output
18	UNICKI	I	Serial clock input
19	UNICKO	O	Serial clock output
20	$\overline{\text{BUSON}}$	O	BUS ON control output
21	$\overline{\text{SYSRST}}$	O	System reset control output
22	AMPON	O	Power amplifier power control output
23, 24	—	—	Not used.
25	PW-ON	O	System power control output
26	ILL-ON	O	Illumination power control output
27	COLOR	I/O	Illumination color select control input/output
28	—	—	Not used.
29 – 32	—	I	Connect to GND.
33	GND	—	GND of microcomputer.
34, 35	—	I	Connect to GND.
36 – 39	—	—	Not used.
40	AD-ON	O	Power control output for A/D conversion.
41	—	—	Not used.
42	PW-SEL	I	Power select initial setting input
43	RC-IN1	I	Rotary commander A/D conversion input 1
44	$\overline{\text{TEST}}$	I	TEST mode setting input
45	$\overline{\text{EQ-SEL}}$	I	Equalizer connection with/without initial setting input
46	BEEP	O	Buzzer control output
47	MUT	O	System mute control output
48	VOLCE	O	Electric volume serial chip enable output
49	—	—	Not used.
50	VOLCKO	O	Electric volume serial clock output
51	—	—	Not used.
52	VOLSO	O	Electric volume serial data output
53 – 56	—	—	Not used.
57	$\overline{\text{DIMMER}}$	I/O	Dimmer control input/output
58, 59	—	—	Not used.

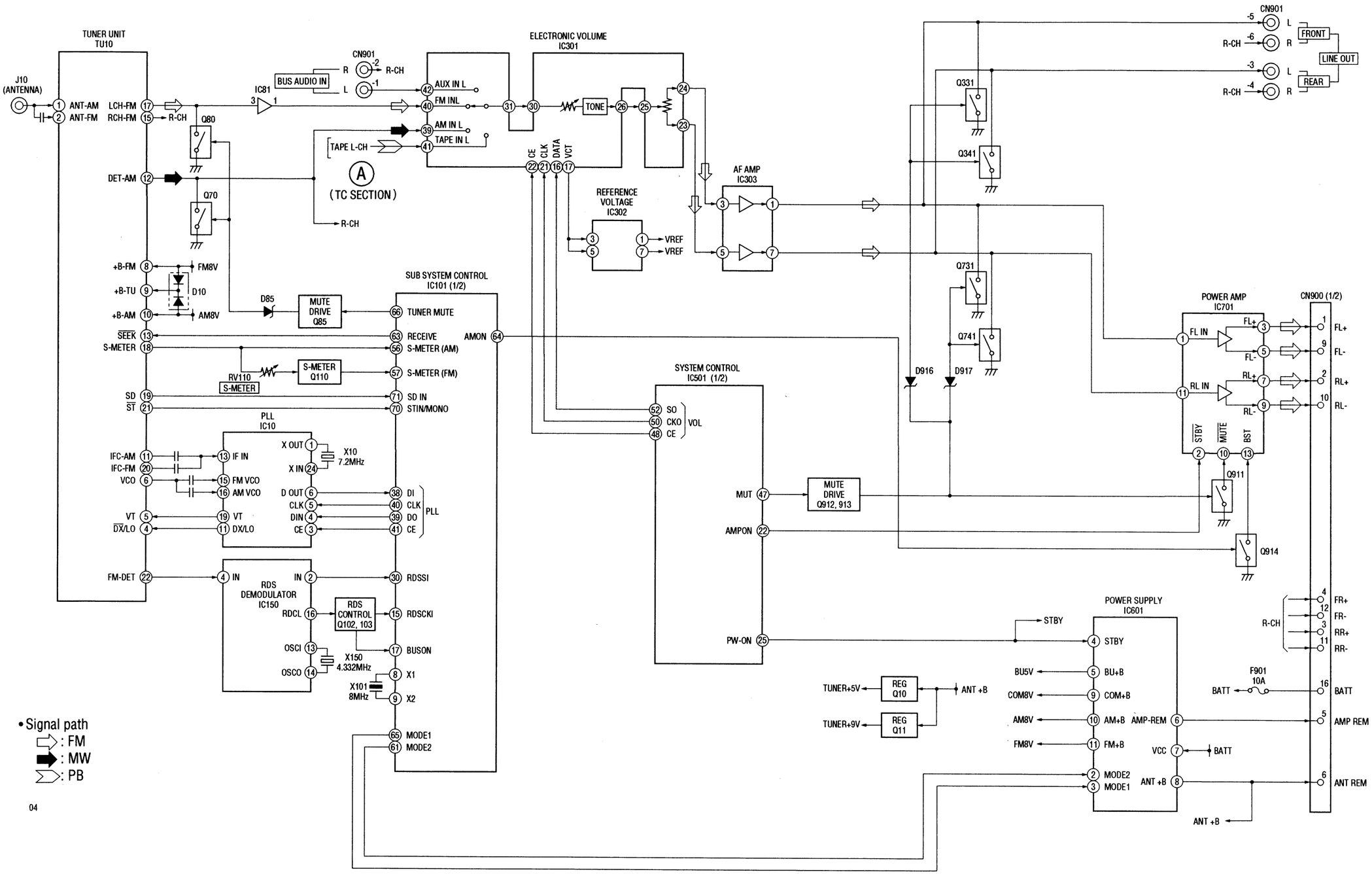
6-2. BLOCK DIAGRAM — TC SECTION —



• Signal path
▷: PB

04

6-3. BLOCK DIAGRAM — MAIN SECTION —



6-4. PRINTED WIRING BOARDS — MAIN SECTION —

• **Semiconductor Location**

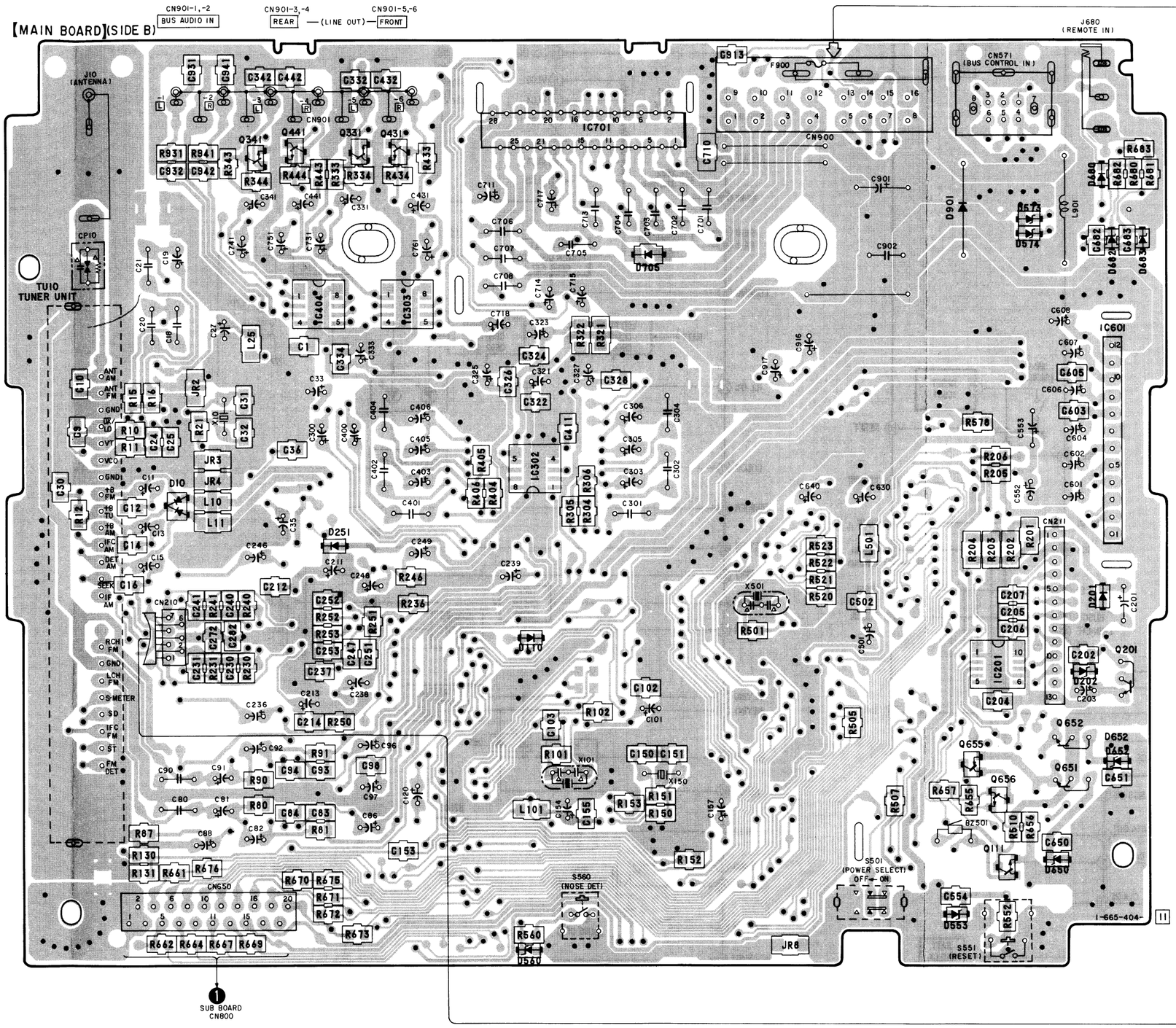
Ref. No.	Location	Ref. No.	Location
D10	E-13	IC201	G-20
D11	D-9	IC210	F-8
D12	E-9	IC301	E-6
D85	H-10	IC302	E-16
D110	F-16	IC303	C-15
D111	F-5	IC404	C-14
D201	F-21	IC501	G-4
D202	G-21	IC551	I-3
D251	F-14	IC571	D-2
D252	G-7	IC601	D-21
D501	G-3	IC701	B-17
D551	E-2		
D552	E-2	Q10	D-9
D553	I-20	Q11	E-9
D560	I-16	Q70	F-11
D571	D-3	Q80	H-9
D572	D-3	Q85	G-8
D573	C-21	Q90	H-9
D574	C-21	Q101	G-7
D575	C-2	Q102	H-6
D576	D-2	Q103	H-6
D577	D-3	Q110	F-5
D578	C-3	Q111	H-20
D630	E-4	Q201	G-21
D631	E-4	Q202	F-1
D640	E-4	Q203	F-2
D641	E-4	Q231	F-7
D650	H-21	Q241	F-7
D651	I-8	Q251	G-7
D652	G-21	Q331	B-15
D661	I-7	Q341	B-14
D662	I-7	Q431	B-15
D664	I-7	Q441	B-14
D667	I-7	Q571	C-3
D669	I-7	Q572	C-2
D670	I-7	Q573	E-2
D671	I-7	Q574	D-3
D672	I-7	Q630	E-4
D673	I-7	Q640	E-4
D680	B-21	Q650	H-1
D682	C-21	Q651	H-21
D683	C-22	Q652	G-21
D705	C-17	Q653	H-2
D901	C-20	Q655	G-20
D905	E-3	Q656	H-20
D911	C-4	Q657	I-8
D912	C-4	Q658	I-7
D915	D-4	Q731	B-8
D916	D-5	Q741	B-9
D917	D-5	Q751	B-9
		Q761	B-7
IC10	E-10	Q911	D-5
IC81	H-8	Q912	D-4
IC101	G-6	Q913	D-4
IC150	H-5	Q914	C-4

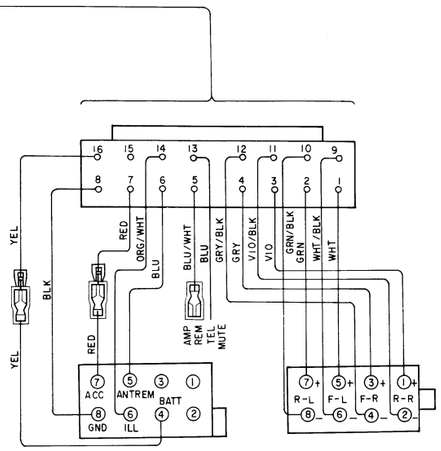
Note :

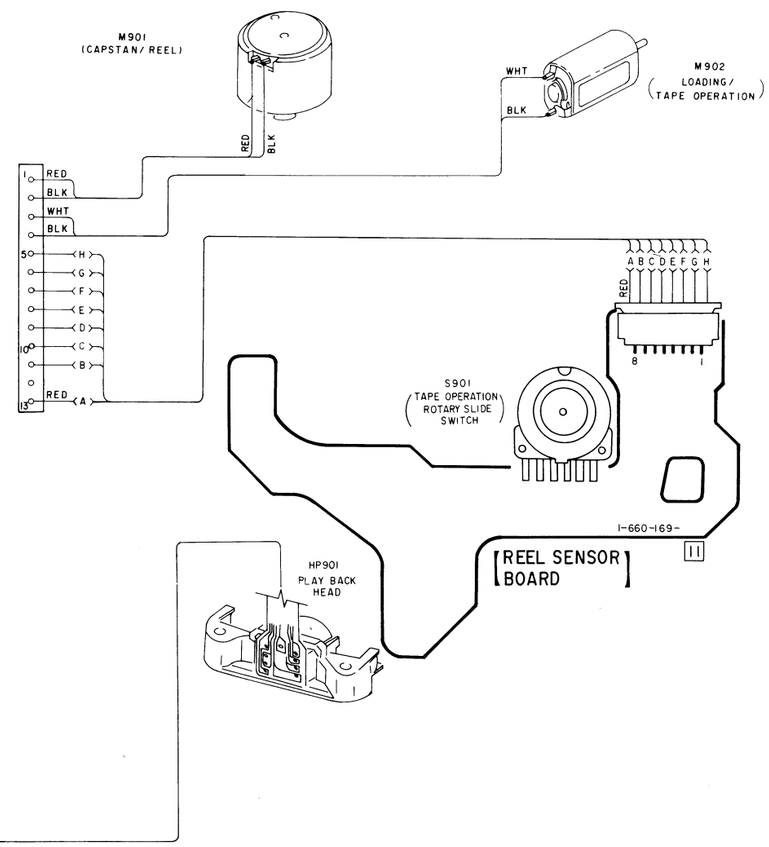
- ○— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
  (The other layer's patterns are not indicated.)

12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27

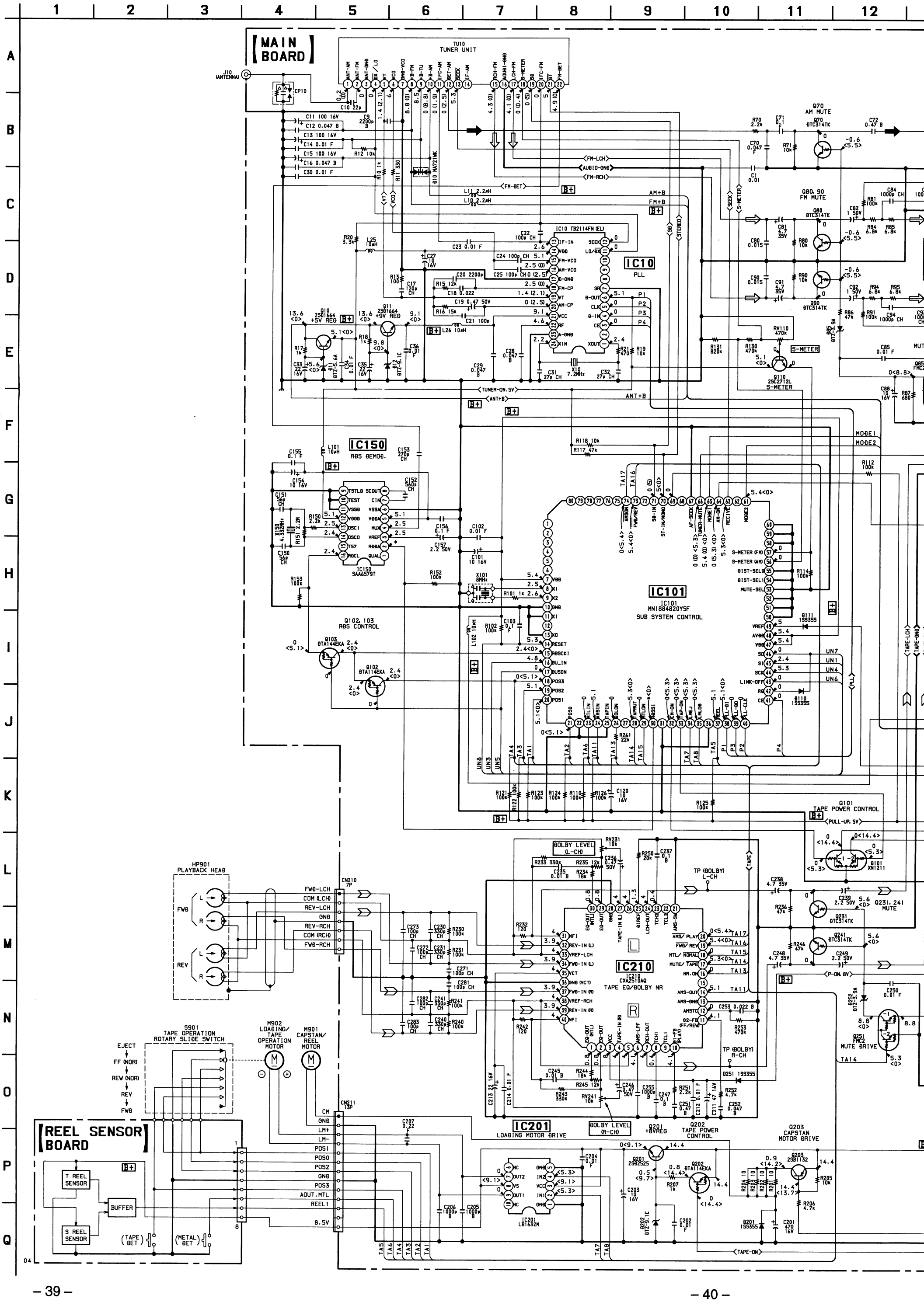
【MAIN BOARD】(SIDE B)







6-5. SCHEMATIC DIAGRAM — MAIN SECTION — • Refer to page 49 for IC Block Diagrams.



IC101
IC101
MN1884820Y5F
SUB SYSTEM CONTROL

IC81
IC81
NJM4580E
LINE AMP

IC301
IC301
CXA1946BQ
ELECTRONIC VOLUME

IC302
REFERENCE VOLTAGE

IC303
AF AMP

IC404
AF AMP

IC501
IC501
#P0780586C-462
-389
SYSTEM CONTROL

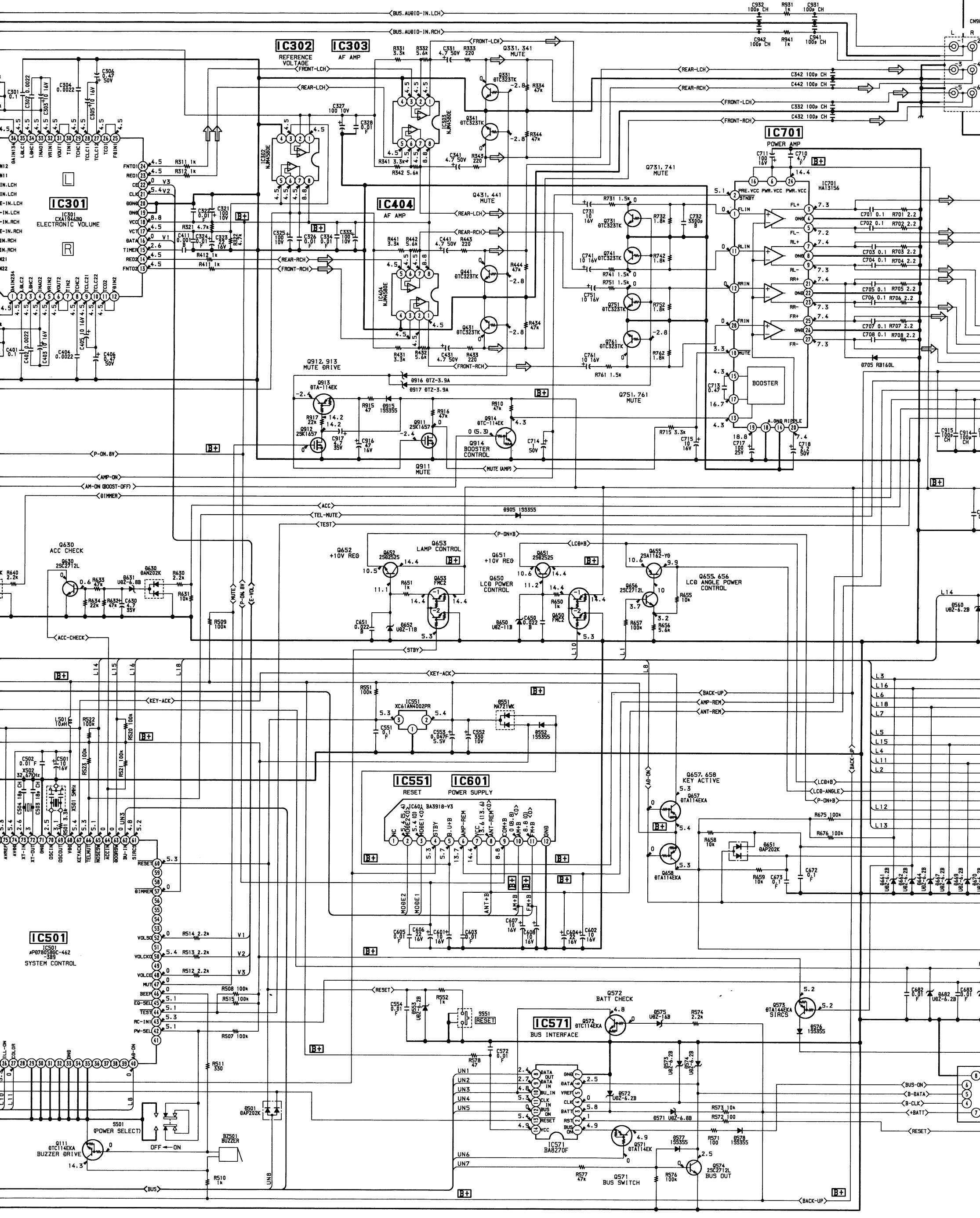
IC551
RESET

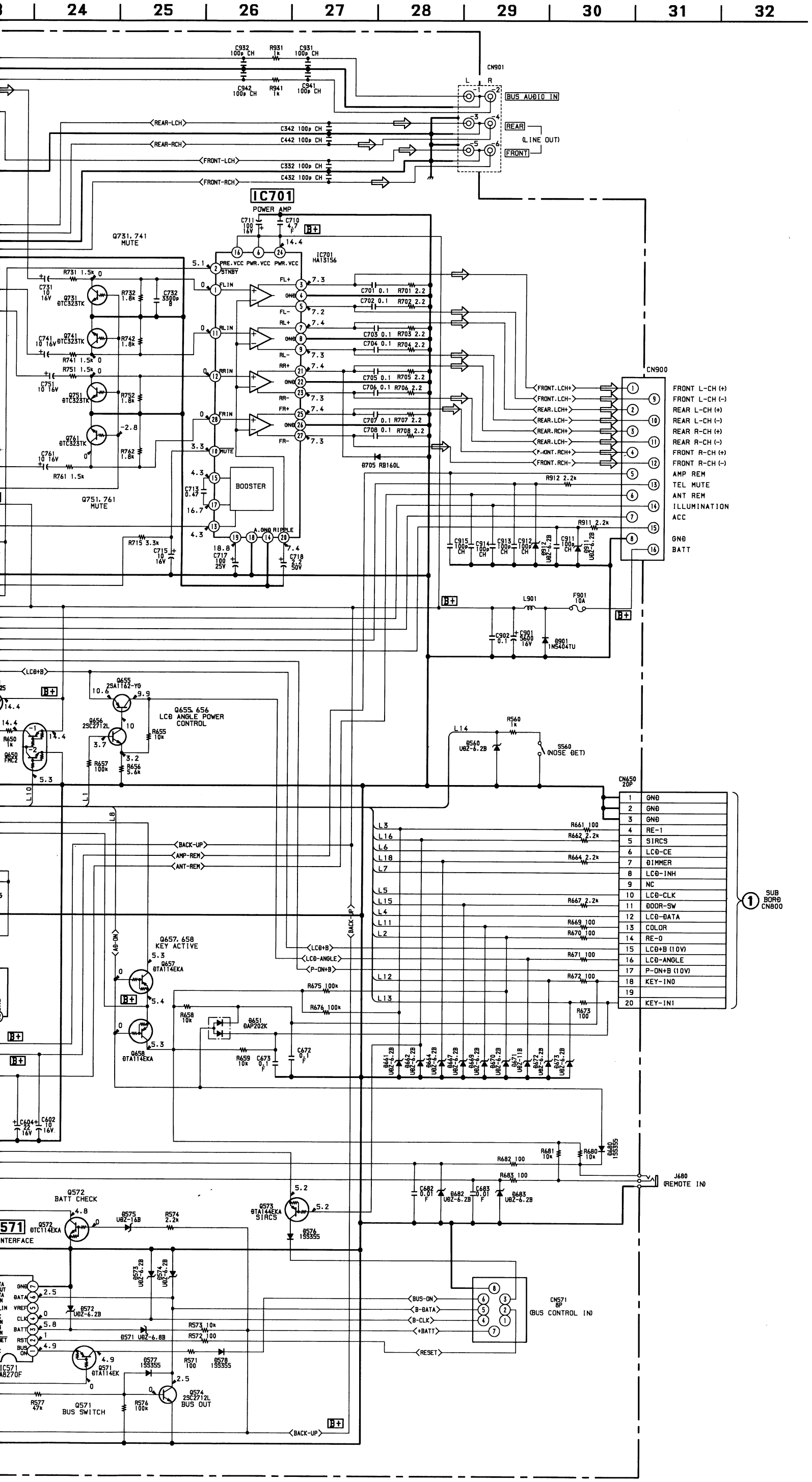
IC210
IC210
A2510AQ
Q/DOLBY NR

Q70 AM MUTE
Q80, 90 FM MUTE
Q85 MUTE DRIVE
Q110 S-METER
Q101 TAPE POWER CONTROL
Q201 +8VREG
Q202 TAPE POWER CONTROL
Q203 CAPSTAN MOTOR DRIVE
Q231, 241 MUTE
Q251 MUTE DRIVE
Q640 DIMMER CONTROL
Q630 ACC CHECK
Q652 +10V REG
Q653 LAMP CONTROL
Q912, 913 MUTE DRIVE
Q911 MUTE
Q111 BUZZER DRIVE

S501 (POWER SELECT)
BZ501 BUZZER

16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28





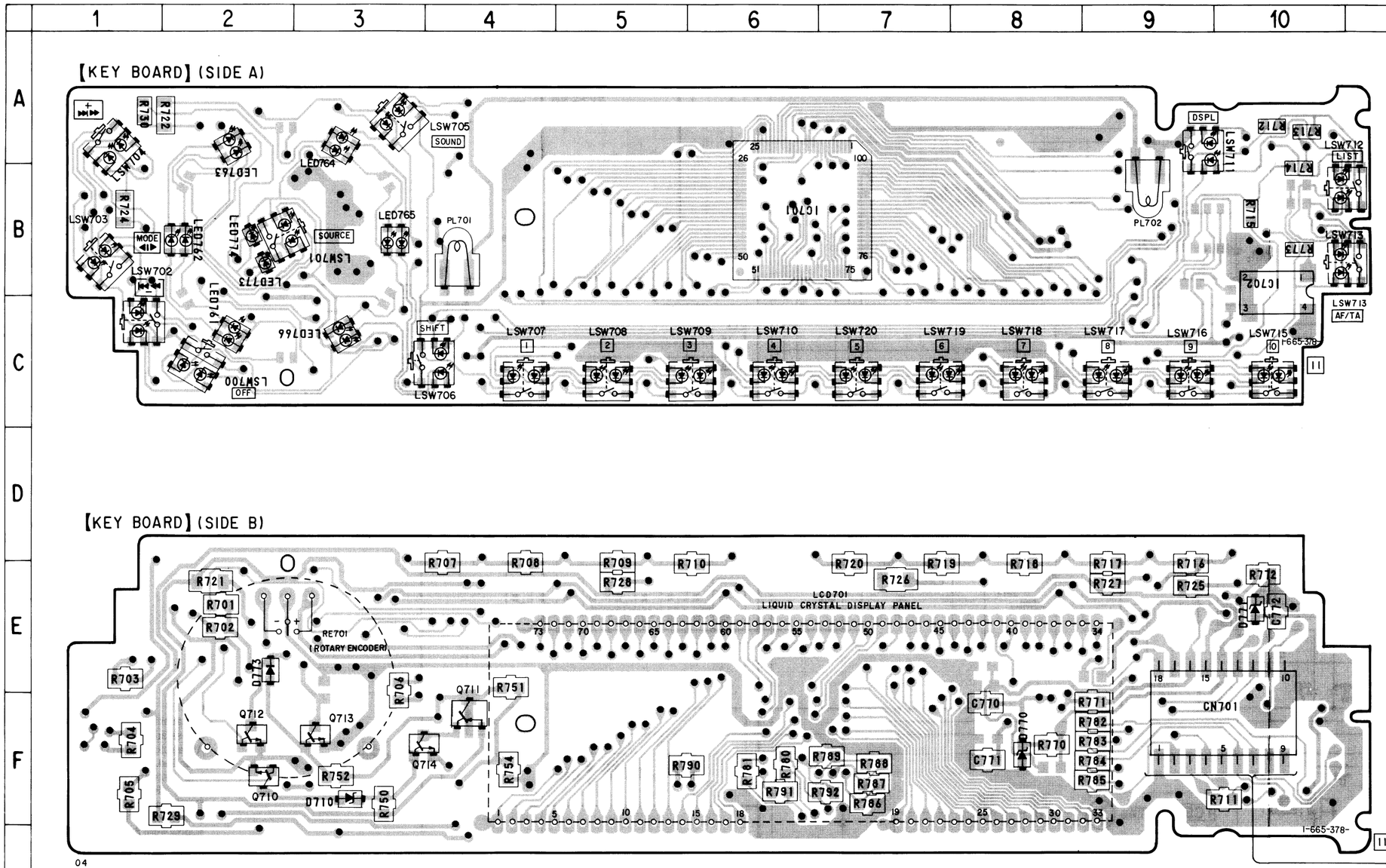
Note :

- All capacitors are in μF unless otherwise noted. pF : μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line.
- ▭ : adjustment for repair.
- Power voltage is dc 14.4 V and fed with regulated dc power supply from ACC and BATT terminals.
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM
  ( ) : MW
  < > : PB
  ✳ : impossible measurement point.
- Voltage are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerance.
- Signal path.
  ⇨ : FM
  ➡ : MW
  ⇨ : PB
- Abbreviation
  G : German model

6-6. PRINTED WIRING BOARDS — PANEL SECTION —

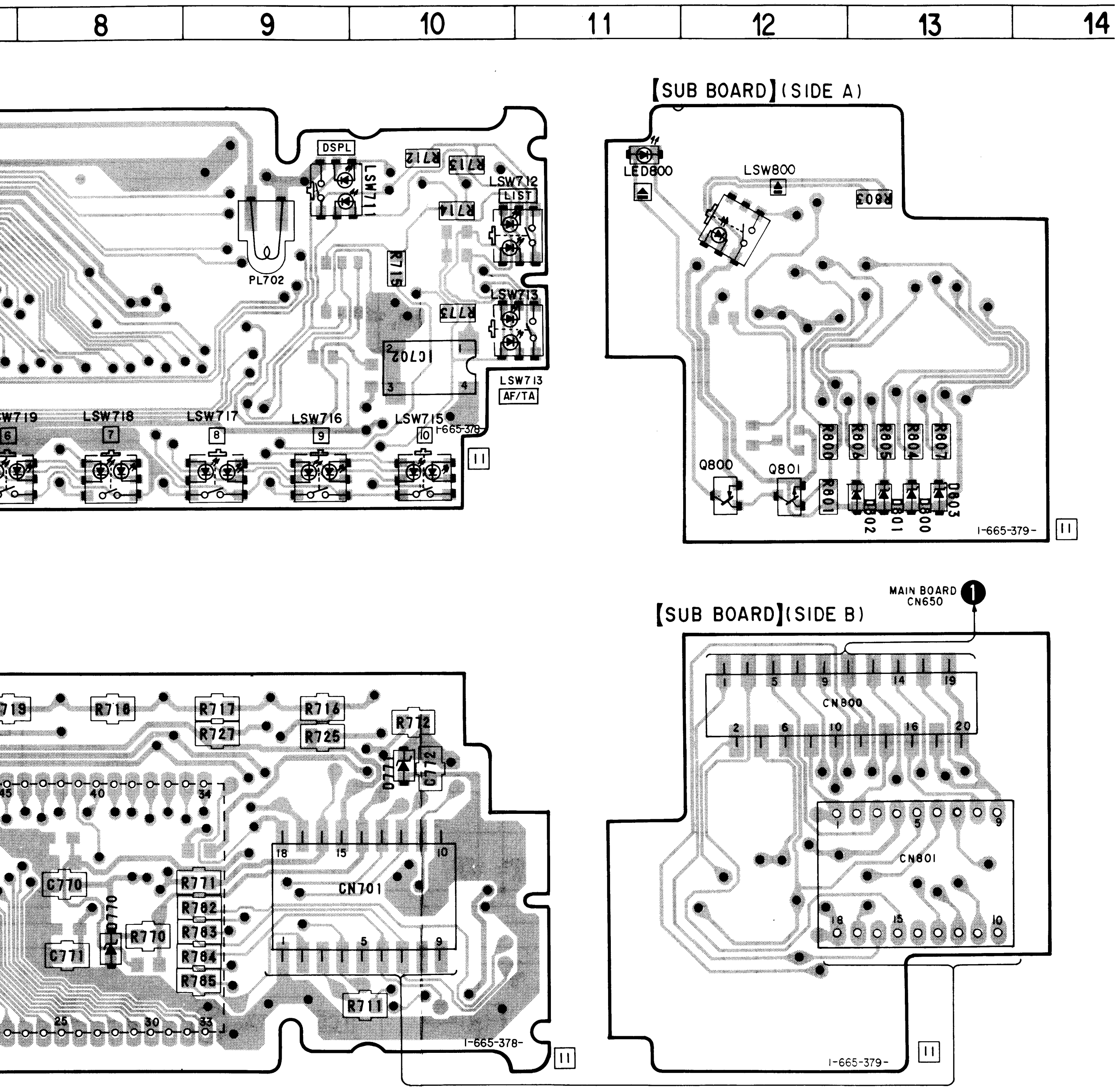
• **Semiconductor Location**

Ref. No.	Location
D710	F-3
D770	F-8
D771	E-10
D773	E-2
D800	C-13
D801	C-13
D802	C-13
D803	C-13
IC701	B-6
IC702	B-10
LED761	C-2
LED762	B-2
LED763	A-2
LED764	A-3
LED765	B-3
LED766	C-3
LED773	B-2
LED774	B-2
LED800	A-11
Q710	F-2
Q711	F-4
Q712	F-2
Q713	F-3
Q714	F-3
Q800	C-12
Q801	C-12



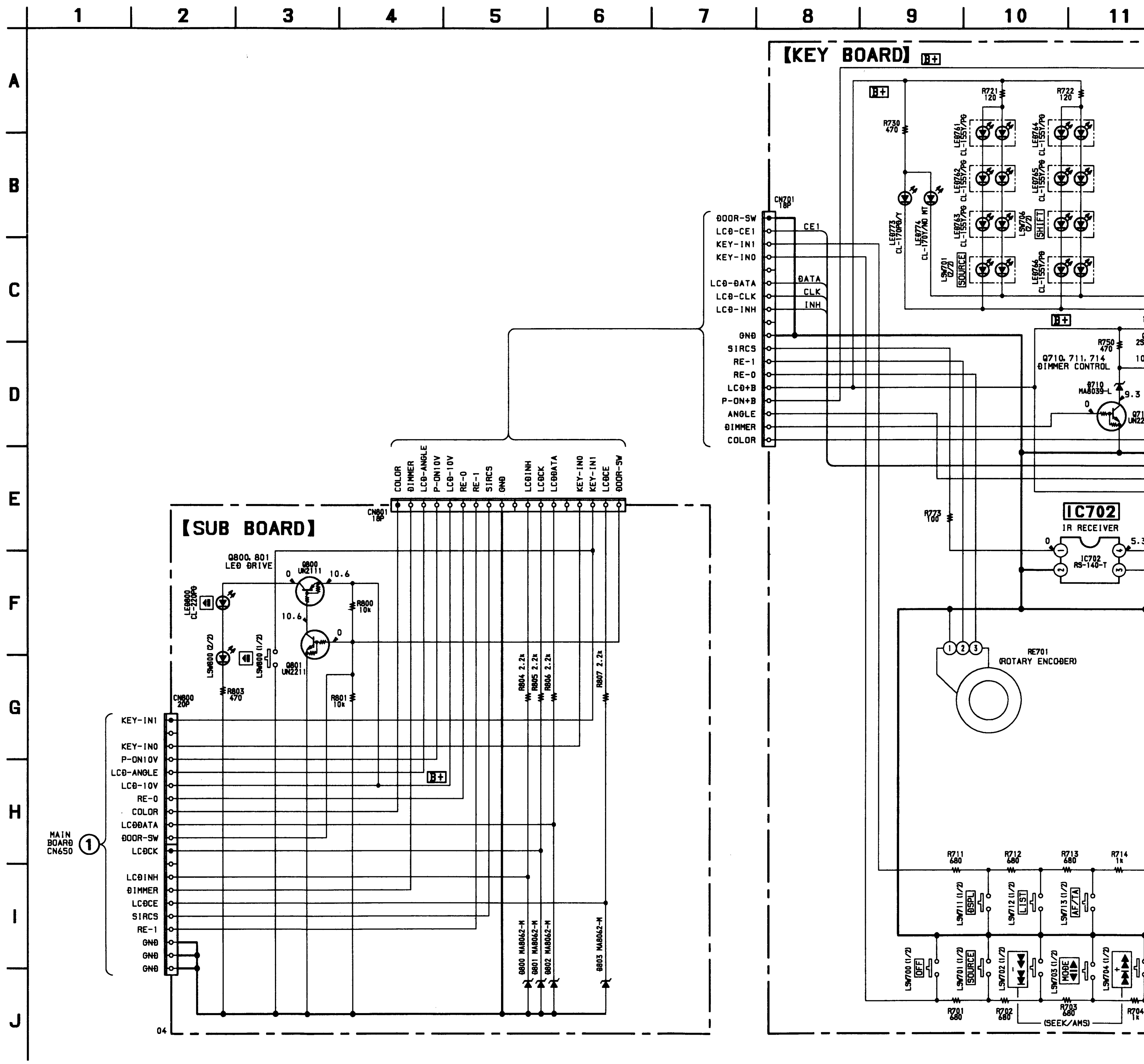
Note :

- ● : Through hole.
- ▨ : Pattern on the side which is seen.
  (The other layer's patterns are not indicated.)

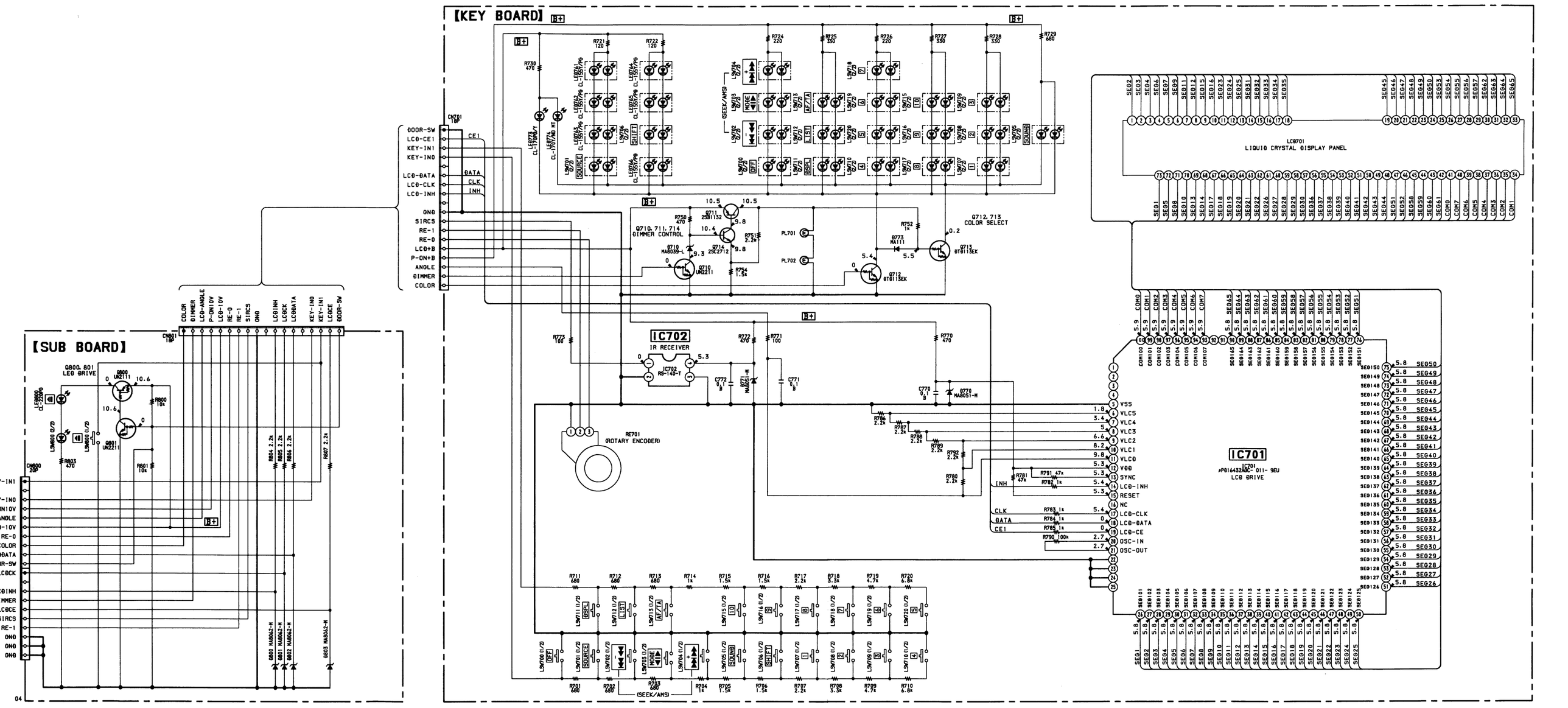


8
9
10
11
12
13
14
[SUB BOARD] (SIDE A)
LED800
LSW800
R803
DSPL
R712
R713
LSW711
LSW712
LIST
R714
R715
PL702
LSW713
R773
IC702
LSW713
AF/TA
LSW719
LSW718
LSW717
LSW716
LSW715
1-665-378-
Q800
Q801
R800
R806
R805
R804
R807
R801
D802
D801
D800
D803
1-665-379-
MAIN BOARD CN650
[SUB BOARD] (SIDE B)
CN800
CN801
R718
R717
R727
R716
R725
R772
D771
C772
C770
D770
R770
C771
R771
R782
R783
R784
R785
CN701
R711
1-665-378-
1-665-379-

6-7. SCHEMATIC DIAGRAM — PANEL SECTION —



[KEY BOARD]
CN701 18P
DOOR-SW
LCD-CE1
KEY-IN1
KEY-IN0
LCD-DATA
LCD-CLK
LCD-INH
GND
SIRCS
RE-1
RE-0
LCD+B
P-ON+B
ANGLE
DIMMER
COLOR
CE1
DATA
CLK
INH
R730 470
R721 120
R722 120
LED773 CL-170PG/Y
LED774 CL-170Y/NO MT
LSW701 (2/2) SOURCE
LSW706 (2/2) SHIFT
Q710, 711, 714 DIMMER CONTROL
R750 470
D710 MA8039-L
9.3
R773 100
IC702 IR RECEIVER
IC702 RS-140-T
5.3
RE701 (ROTARY ENCODER)
R711 680
R712 680
R713 680
R714 1k
LSW711 (1/2) DSPL
LSW712 (1/2) LIST
LSW713 (1/2) AF/TA
LSW700 (1/2) OFF
LSW701 (1/2) SOURCE
LSW702 (1/2)
LSW703 (1/2) MODE
LSW704 (1/2)
R701 680
R702 680
R703 680
R704 1k
(SEEK/AMS)
[SUB BOARD]
CN801 18P
COLOR
DIMMER
LCD-ANGLE
P-ON10V
LCD-10V
RE-0
RE-1
SIRCS
GND
LCDINH
LCDCK
LCDDATA
KEY-IN0
KEY-IN1
LCDCE
DOOR-SW
Q800, 801 LED DRIVE
Q800 UN2111
10.6
Q801 UN2211
LED800 CL-220PG
LSW800 (2/2)
LSW800 (1/2)
R800 10k
R801 10k
R803 470
R804 2.2k
R805 2.2k
R806 2.2k
R807 2.2k
D800 MA8062-M
D801 MA8062-M
D802 MA8062-M
D803 MA8062-M
CN800 20P
KEY-IN1
KEY-IN0
P-ON10V
LCD-ANGLE
LCD-10V
RE-0
COLOR
LCDDATA
DOOR-SW
LCDCK
LCDINH
DIMMER
LCDCE
SIRCS
RE-1
GND
MAIN BOARD CN650

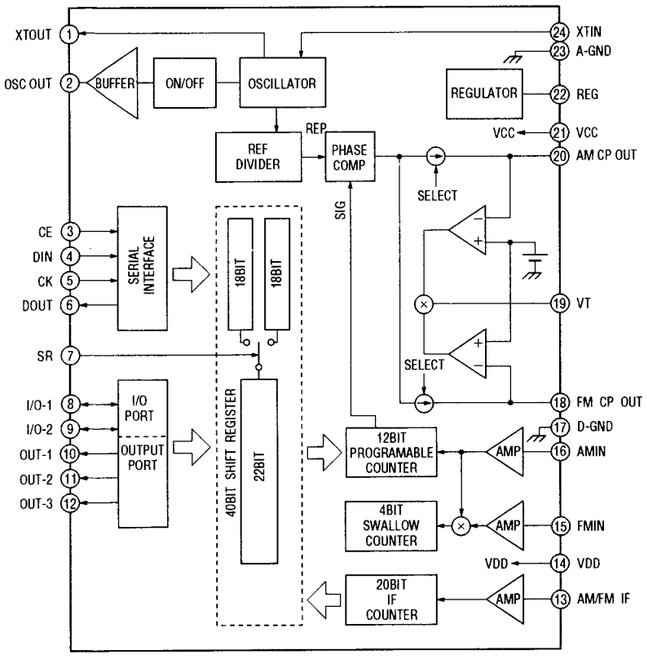


Note :

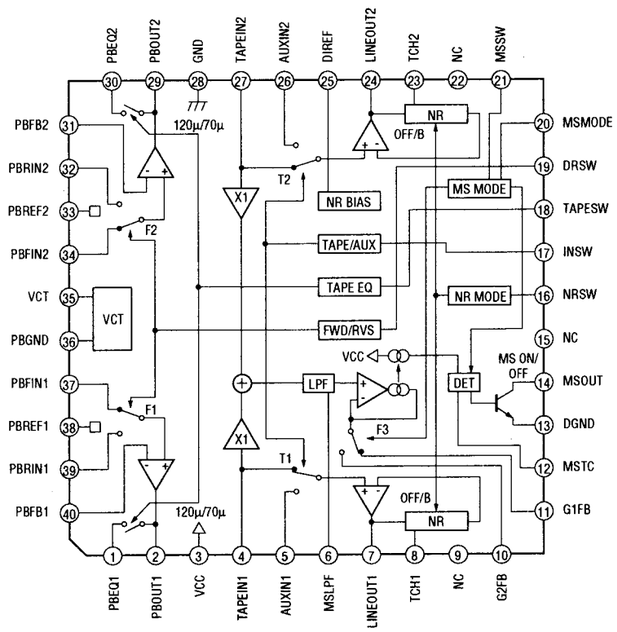
- All capacitors are in μF unless otherwise noted. pF : μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- B+ : B+ Line.
- Power voltage is dc 14.4 V and fed with regulated dc power supply from ACC and BATT terminals.
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
- Voltage are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerance.

• IC Block Diagrams

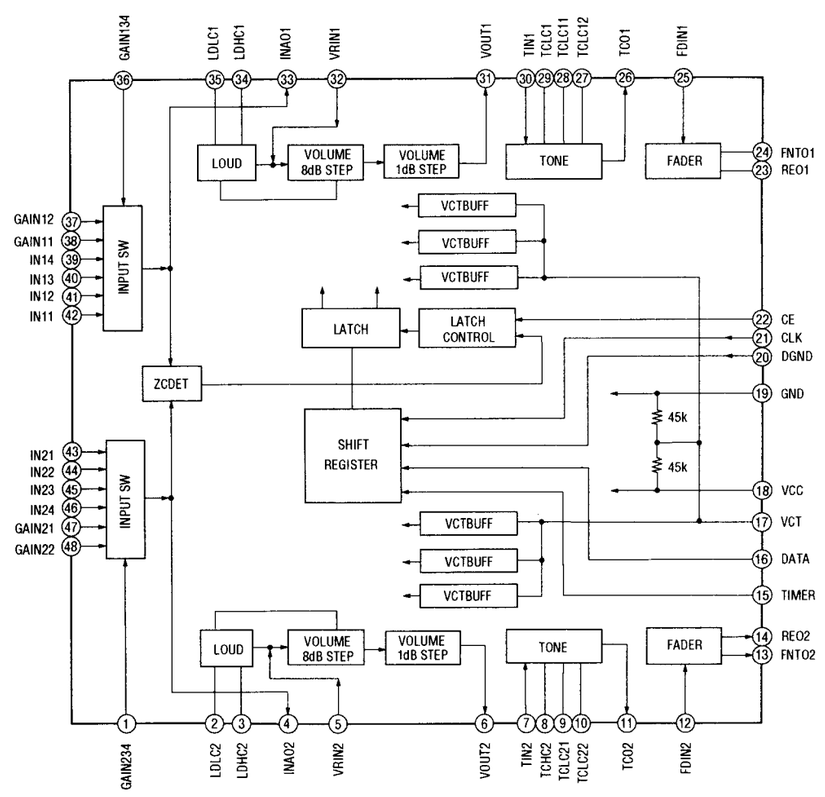
IC10 TB2114FN



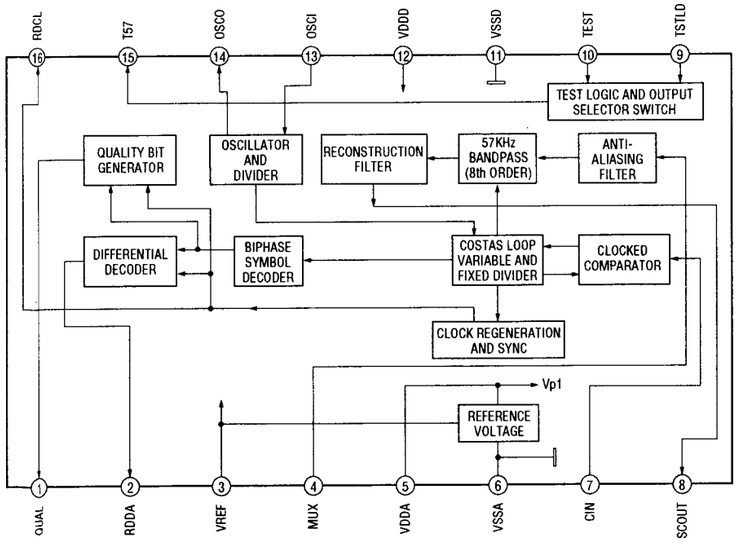
IC210 CXA2510AQ



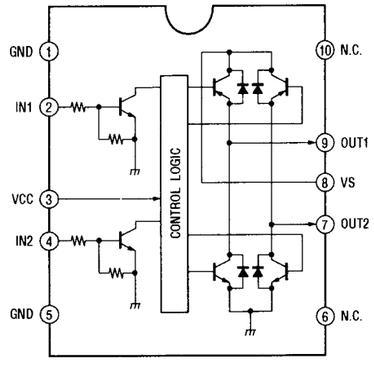
IC301 CXA1946AQ



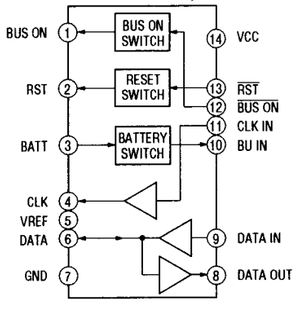
IC150 SAA6579T



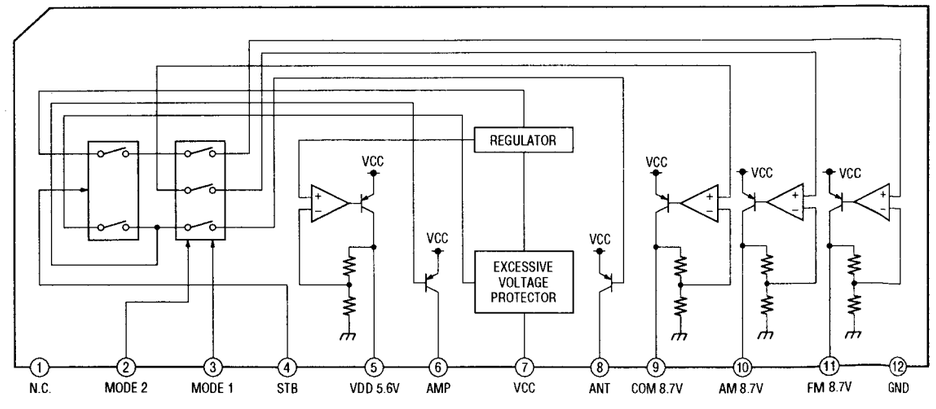
IC201 LB1638M



IC571 BA8270F



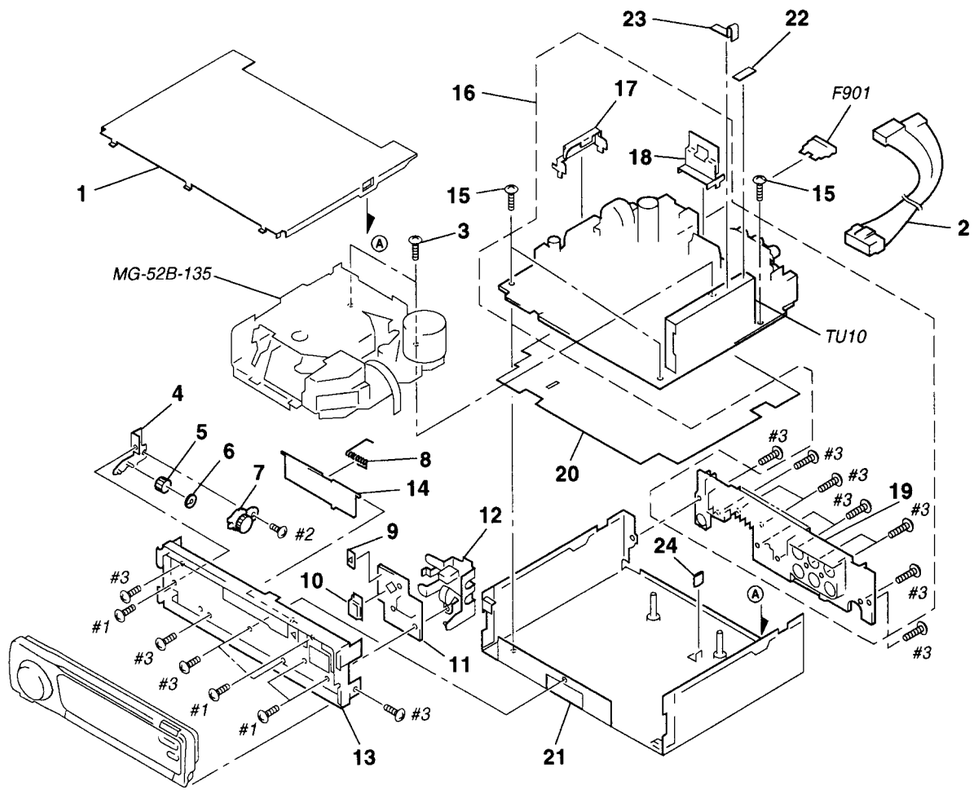
IC601 BA3918-V3



SECTION 7
EXPLODED VIEWS

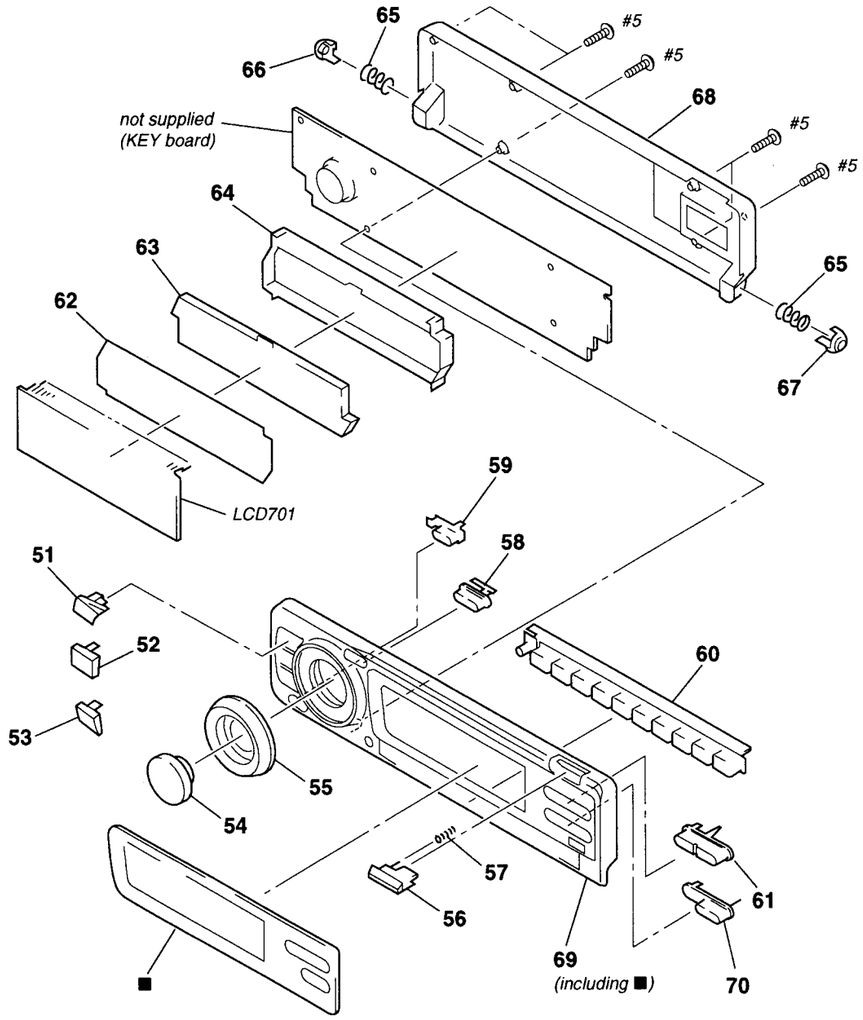
NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
  G : German model
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

7-1. CHASSIS SECTION



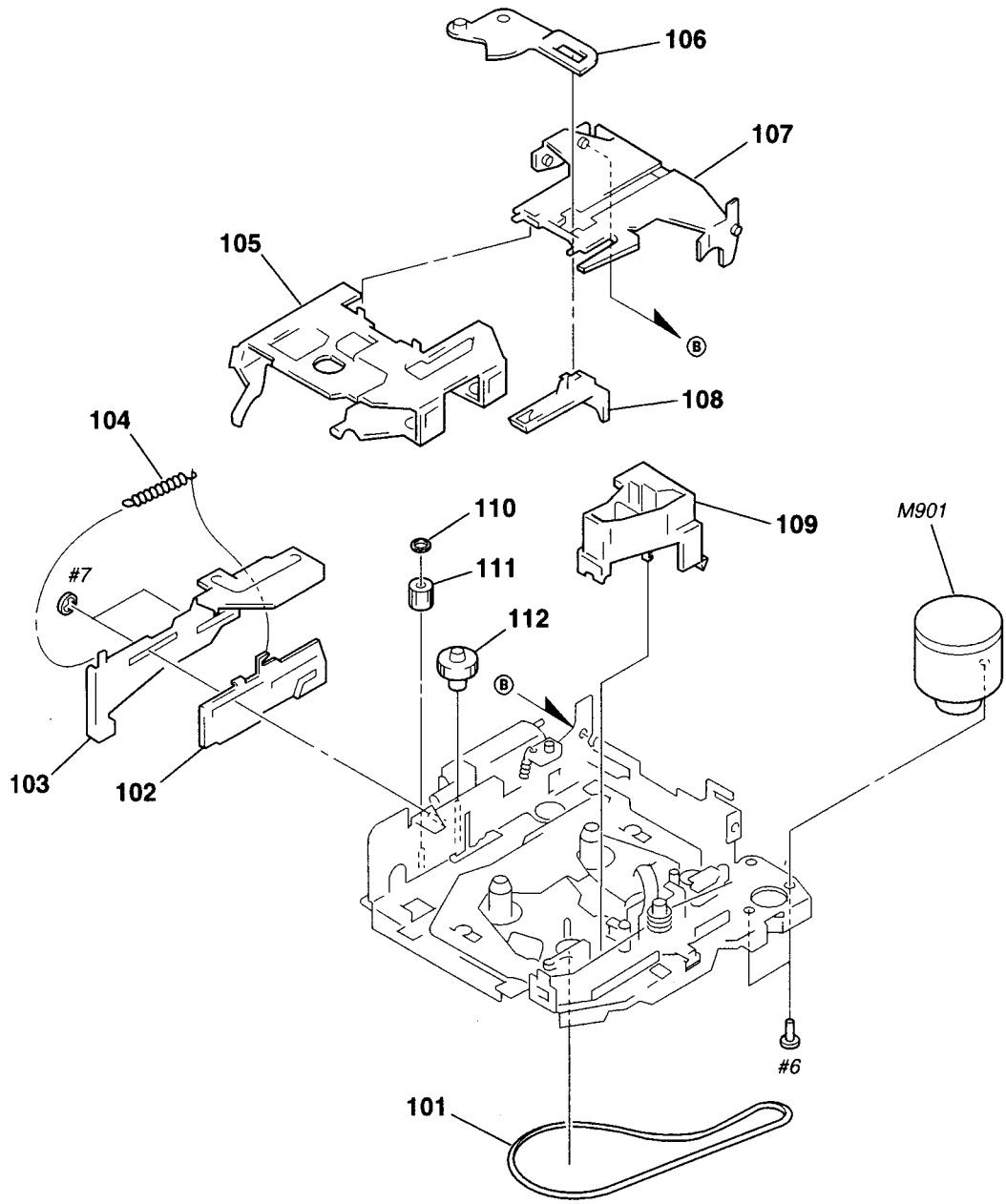
Ref. No.	Part No.	Description	Remark
* 1	X-3373-362-1	COVER ASSY	
2	1-776-527-41	CORD (WITH CONNECTOR) (ISO) (POWER)	
3	3-919-171-01	SCREW (2.6X6) (C TIGHT)	
4	X-3373-376-1	BRACKET (GEAR) ASSY	
5	3-011-170-01	GEAR (HOLDER)	
6	3-341-752-11	WASHER, POLYETHYLENE	
7	3-953-235-31	DAMPER, OIL	
8	3-913-076-01	SPRING (C DOOR), TORSION	
9	3-010-993-11	PLATE (C DOOR), LIGHT GUIDE	
10	3-010-996-01	BUTTON (EJECT)	
* 11	1-665-379-11	SUB BOARD	
12	X-3373-831-1	LOCK ASSY	
13	X-3373-897-1	PANEL ASSY, SUB	
14	3-922-165-91	DOOR, CASSETTE	
15	3-915-923-01	SCREW, GROUND POINT	
* 16	A-3309-968-A	MAIN BOARD, COMPLETE (AEP,UK)	
* 16	A-3309-974-A	MAIN BOARD, COMPLETE (G)	
* 17	3-011-078-01	BRACKET (POWER IC)	
* 18	3-011-090-01	BRACKET (AMP)	
* 19	3-011-077-11	HEAT SINK	
* 20	3-012-196-01	INSULATOR	
* 21	X-3373-384-1	CHASSIS ASSY	
22	9-911-840-XX	CUSHION (U)	
23	3-355-209-01	PLATE (B), GROUND	
24	3-012-860-01	CAP (52), RUBBER	
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
TU10	A-3282-012-A	TUNER UNIT (TUX-006 (E))	

7-2. FRONT PANEL SECTION



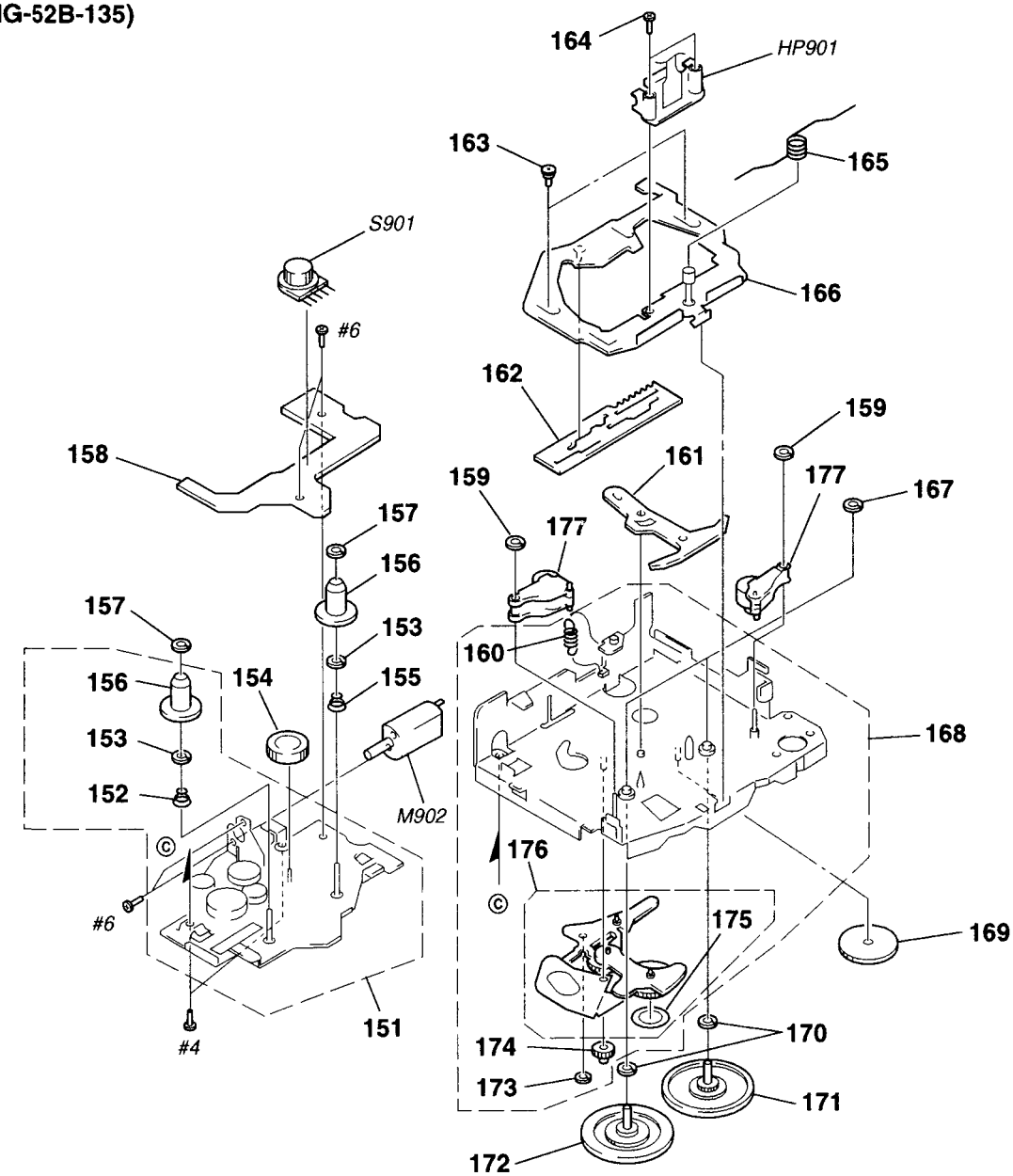
Ref. No.	Part No.	Description	Remark
51	3-010-985-01	BUTTON (+)	
52	3-010-986-01	BUTTON (MODE)	
53	3-010-987-01	BUTTON (-)	
54	X-3373-830-1	BUTTON (SOURCE) ASSY	
55	3-010-989-11	KNOB (VOL)	
56	3-010-983-21	BUTTON (OPEN)	
57	3-010-997-01	SPRING (OPEN)	
58	3-010-982-01	BUTTON (SOUND)	
59	3-010-981-01	BUTTON (OFF)	
60	3-010-980-01	BUTTON (10 KEY)	
61	3-011-459-01	BUTTON (PTY)	
* 62	3-010-995-01	ILLUMINATOR (LCD)	
* 63	3-010-991-11	PLATE (LCD), LIGHT GUIDE	
* 64	3-010-994-11	HOLDER (LCD)	
65	3-010-998-01	SPRING (BEARING)	
66	3-010-999-11	BEARING (L)	
67	3-011-000-11	BEARING (R)	
68	3-010-977-21	PANEL, FRONT BACK	
69	X-3373-708-1	PANEL SUB ASSY, FRONT	
70	3-011-004-01	BUTTON (AF/TA)	
LCD701	1-801-679-11	DISPLAY PANEL, LIQUID CRYSTAL	

7-3. MECHANISM DECK SECTION-1
(MG-52B-135)



Ref. No.	Part No.	Description	Remark
101	3-928-675-01	BELT (52)	
* 102	3-928-673-01	LEVER (LDG-A)	
103	3-928-674-01	LEVER (LDG-B)	
104	3-933-341-01	SPRING (LEVER LDG), TENSION	
105	3-928-671-01	HOUSING	
* 106	3-933-347-01	ARM (SUCTION)	
107	3-933-340-01	HANGER	
108	3-933-346-01	CATCHER	
109	3-933-344-01	GUIDE (C)	
110	3-341-753-11	WASHER, POLYETHYLENE	
111	3-933-335-01	GEAR (LDG-FT)	
112	3-928-667-01	GEAR (LDG-A)	
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	

7-4. MECHANISM DECK SECTION-2
(MG-52B-135)



Ref. No.	Part No.	Description	Remark
151	X-3371-710-1	CHASSIS (S) ASSY	
152	3-933-337-01	SPRING (B-T-R), CONE COIL	
153	3-701-437-01	POLY-SLIDER (A)	
154	3-933-333-01	GEAR (LDG-E)	
155	3-933-339-01	SPRING (B-T-F), CONE COIL	
156	3-933-345-01	GEAR, REEL	
157	3-954-807-01	WASHER	
158	1-660-169-11	REEL BOARD	
159	3-341-752-11	WASHER, POLYETHYLENE	
160	3-933-336-01	SPRING (ARM HANGER), TENSION	
161	3-928-669-01	LEVER (PINCH SELECTION)	
162	3-928-668-01	LEVER (MODE)	
163	3-933-338-01	SCREW (HP), STEP	
164	3-927-100-01	SCREW (+PS 2X10), SPECIAL	
165	3-928-670-01	SPRING (PINCH PRESS)	

Ref. No.	Part No.	Description	Remark
* 166	X-3371-712-1	PLATE SUB ASSY, HEAD	
167	3-364-151-01	WASHER	
* 168	X-3371-705-1	CHASSIS (M) ASSY (B)	
169	X-3371-707-1	CLUTCH (PLAY) ASSY	
170	3-701-437-21	WASHER	
171	3-930-932-01	FLYWHEEL (F) (SEF)	
172	A-3291-667-A	CLUTCH (FR) ASSY	
173	3-321-813-01	WASHER, COTTER POLYETHYLENE	
174	3-933-343-01	GEAR (REVERSE)	
175	3-933-383-01	SEAL (32), REFLECTION	
176	X-3371-703-1	LEVER (GEAR) ASSY	
177	X-3371-713-2	LEVER (PINCH) ASSY	
HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)	
M902	A-3291-664-A	MOTOR ASSY, SUB (LOADING/TAPE OPERATION)	
S901	1-692-885-11	SWITCH, ROTARY SLIDE (TAPE OPERATION)	

SECTION 8
ELECTRICAL PARTS LIST

KEY

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Abbreviation
  G : German model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example:
  uA.. : μA.. uPA.. : μPA..
  uPB.. : μPB.. uPC.. : μPC.. uPD.. : μPD..
- CAPACITORS
  uF : μF
- COILS
  uH : μH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
		KEY BOARD	
		**********	
*	3-010-991-11	PLATE (LCD), LIGHT GUIDE	
*	3-010-994-11	HOLDER (LCD)	
*	3-010-995-01	ILLUMINATOR (LCD)	
		< CAPACITOR >	
C770	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C771	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C772	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
		< CONNECTOR >	
CN701	1-778-183-11	PLUG, CONNECTOR 18P	
		< DIODE >	
D710	8-719-423-11	DIODE MA8039-L	
D770	8-719-420-90	DIODE MA8051-M	
D771	8-719-420-90	DIODE MA8051-M	
D773	8-719-404-49	DIODE MA111	
		< IC >	
IC701	8-759-331-68	IC uPD16432AGC-011-9EU	
IC702	8-749-012-17	IC RS-140-T	
		< LIQUID CRYSTAL DISPLAY >	
LCD701	1-801-679-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< DIODE >	
LED761	8-719-987-45	LED CL-155Y/PG-CD	
LED762	8-719-987-45	LED CL-155Y/PG-CD	
LED763	8-719-987-45	LED CL-155Y/PG-CD	
LED764	8-719-987-45	LED CL-155Y/PG-CD	
LED765	8-719-987-45	LED CL-155Y/PG-CD	
LED766	8-719-987-45	LED CL-155Y/PG-CD	
LED773	8-719-033-14	LED CL-170PG-CD-T	
LED774	8-719-033-13	LED CL-170Y-CD-T	

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
LSW700	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (OFF)	
LSW701	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SOURCE)	
LSW702	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (⏮ ◀◀ -(SEEK/AMS))	
LSW703	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (MODE ◀II▶)	
LSW704	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (▶▶⏭ ▶▶ +(SEEK/AMS))	
LSW705	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SOUND)	
LSW706	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SHIFT)	
LSW707	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (1)	
LSW708	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (2)	
LSW709	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (3)	
LSW710	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (4)	
LSW711	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (DSPL)	
LSW712	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (LIST)	
LSW713	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (AF/TA)	
LSW715	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (10)	
LSW716	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (9)	
LSW717	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (8)	
LSW718	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (7)	
LSW719	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (6)	
LSW720	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (5)	
		< PILOT LAMP >	
PL701	1-517-630-31	LAMP, PILOT	
PL702	1-517-630-31	LAMP, PILOT	
		< TRANSISTOR >	
Q710	8-729-421-22	TRANSISTOR UN2211	
Q711	8-729-106-60	TRANSISTOR 2SB1115A	
Q712	8-729-904-66	TRANSISTOR DTD113EK	
Q713	8-729-904-66	TRANSISTOR DTD113EK	
Q714	8-729-230-49	TRANSISTOR 2SC2712-YG	
		< RESISTOR >	
R701	1-216-045-00	METAL CHIP 680 5% 1/10W	
R702	1-216-045-00	METAL CHIP 680 5% 1/10W	
R703	1-216-045-00	METAL CHIP 680 5% 1/10W	
R704	1-216-049-11	METAL GLAZE 1K 5% 1/10W	

KEY **MAIN**

Ref. No.	Part No.	Description			Remark
R705	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R706	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R707	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R708	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R709	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R710	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R711	1-216-045-00	METAL CHIP	680	5%	1/10W
R712	1-216-045-00	METAL CHIP	680	5%	1/10W
R713	1-216-045-00	METAL CHIP	680	5%	1/10W
R714	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R715	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R716	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R717	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R718	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R719	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R720	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R721	1-216-176-11	METAL CHIP	120	5%	1/8W
R722	1-216-176-11	METAL CHIP	120	5%	1/8W
R724	1-216-182-00	METAL GLAZE	220	5%	1/8W
R725	1-216-037-00	METAL CHIP	330	5%	1/10W
R726	1-216-182-00	METAL GLAZE	220	5%	1/8W
R727	1-216-037-00	METAL CHIP	330	5%	1/10W
R728	1-216-037-00	METAL CHIP	330	5%	1/10W
R729	1-216-045-00	METAL CHIP	680	5%	1/10W
R730	1-216-041-00	METAL CHIP	470	5%	1/10W
R750	1-216-041-00	METAL CHIP	470	5%	1/10W
R751	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R752	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R754	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R770	1-216-041-00	METAL CHIP	470	5%	1/10W
R771	1-216-025-00	METAL GLAZE	100	5%	1/10W
R772	1-216-041-00	METAL CHIP	470	5%	1/10W
R773	1-216-025-00	METAL GLAZE	100	5%	1/10W
R780	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R781	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R782	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R783	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R784	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R785	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R786	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R787	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R788	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R789	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R790	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R791	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R792	1-216-057-00	METAL CHIP	2.2K	5%	1/10W

Ref. No.	Part No.	Description			Remark
		< ROTARY ENCODER >			
RE701	1-475-014-11	ENCODER, ROTARY			
**********					
*	A-3309-968-A	MAIN BOARD, COMPLETE (AEP,UK)			
*	A-3309-974-A	MAIN BOARD, COMPLETE (G)			
		**********			
*	3-011-077-11	HEAT SINK			
*	3-011-078-01	BRACKET (POWER IC)			
*	3-011-090-01	BRACKET (AMP)			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
		< BUZZER >			
BZ501	1-504-920-11	BUZZER			
		< CAPACITOR >			
C1	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C9	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C10	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C11	1-126-933-11	ELECT	100uF	20%	16V
C12	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C13	1-126-933-11	ELECT	100uF	20%	16V
C14	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C15	1-126-933-11	ELECT	100uF	20%	16V
C16	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C17	1-163-253-11	CERAMIC CHIP	120PF	5%	50V
C18	1-136-157-00	FILM	0.022uF	5%	50V
C19	1-124-465-00	ELECT	0.47uF	20%	50V
C20	1-137-366-11	FILM	0.0022uF	5%	50V
C21	1-137-358-11	FILM	0.0001uF	5%	50V
C22	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C23	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C24	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C25	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C27	1-126-157-11	ELECT	10uF	20%	16V
C28	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C29	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C30	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C31	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C32	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C33	1-124-234-00	ELECT	22uF	20%	16V
C34	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C35	1-124-234-00	ELECT	22uF	20%	16V
C36	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C70	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C71	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C72	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C80	1-136-155-00	FILM	0.015uF	5%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C503	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C504	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C551	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C552	1-126-924-11	ELECT	330uF	20%	10V
C553	1-125-701-11	DOUBLE LAYERS	0.047F		5.5V
C554	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C572	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C601	1-126-157-11	ELECT	10uF	20%	16V
C602	1-126-157-11	ELECT	10uF	20%	16V
C603	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C604	1-124-234-00	ELECT	22uF	20%	16V
C605	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C606	1-124-234-00	ELECT	22uF	20%	16V
C607	1-126-157-11	ELECT	10uF	20%	16V
C608	1-126-157-11	ELECT	10uF	20%	16V
C630	1-126-163-11	ELECT	4.7uF	20%	50V
C640	1-126-163-11	ELECT	4.7uF	20%	50V
C650	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C651	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C672	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C673	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C682	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C683	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C701	1-136-165-00	FILM	0.1uF	5%	50V
C702	1-136-165-00	FILM	0.1uF	5%	50V
C703	1-136-165-00	FILM	0.1uF	5%	50V
C704	1-136-165-00	FILM	0.1uF	5%	50V
C705	1-136-165-00	FILM	0.1uF	5%	50V
C706	1-136-165-00	FILM	0.1uF	5%	50V
C707	1-136-165-00	FILM	0.1uF	5%	50V
C708	1-136-165-00	FILM	0.1uF	5%	50V
C710	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C711	1-126-933-11	ELECT	100uF	20%	16V
C713	1-136-173-00	FILM	0.47uF	5%	50V
C714	1-126-160-11	ELECT	1uF	20%	50V
C715	1-126-157-11	ELECT	10uF	20%	16V
C717	1-104-665-11	ELECT	100uF	20%	25V
C718	1-124-257-00	ELECT	2.2uF	20%	50V
C731	1-126-157-11	ELECT	10uF	20%	16V
C732	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C741	1-126-157-11	ELECT	10uF	20%	16V
C751	1-126-157-11	ELECT	10uF	20%	16V
C761	1-126-157-11	ELECT	10uF	20%	16V
C901	1-111-233-11	ELECT	5600uF	20%	16V
C902	1-136-165-00	FILM	0.1uF	5%	50V
C911	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C912	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C913	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C914	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C915	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C916	1-124-589-11	ELECT	47uF	20%	16V
C917	1-126-163-11	ELECT	4.7uF	20%	50V
C931	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C932	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C941	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C942	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >			
CN210	1-766-260-11	CONNECTOR, FFC/FPC (ZIF) 7P			
* CN211	1-506-995-11	PIN, CONNECTOR (PC BOARD) 13P			
CN571	1-580-907-31	PLUG, CONNECTOR 8P (BUS CONTROL IN)			
CN650	1-770-411-11	CONNECTOR, BOARD TO BOARD 20P			
CN900	1-774-701-11	PIN, CONNECTOR 16P			
		< JACK >			
CN901	1-774-700-11	JACK, PIN 6P (BUS AUDIO IN, REAR/FRONT LINE OUT)			
		< DISCHARGE GAP >			
CP10	1-519-504-11	GAP, DISCHARGE			
		< DIODE >			
D10	8-719-040-04	DIODE MA721WK-(TX)			
D11	8-719-977-02	DIODE DTZ-TT11-5.6A			
D12	8-719-977-25	DIODE DTZ9.1C			
D85	8-719-976-87	DIODE DTZ3.9A			
D110	8-719-988-62	DIODE 1SS355			
D111	8-719-988-62	DIODE 1SS355			
D201	8-719-988-62	DIODE 1SS355			
D202	8-719-977-25	DIODE DTZ9.1C			
D251	8-719-988-62	DIODE 1SS355			
D252	8-719-976-87	DIODE DTZ3.9A			
D501	8-719-914-44	DIODE DAP202K			
D551	8-719-040-04	DIODE MA721WK-(TX)			
D552	8-719-988-62	DIODE 1SS355			
D553	8-719-105-99	DIODE RD6.2M-B1			
D560	8-719-105-99	DIODE RD6.2M-B1			
D571	8-719-056-83	DIODE UDZ-TE-17-6.8B			
D572	8-719-105-99	DIODE RD6.2M-B1			
D573	8-719-105-99	DIODE RD6.2M-B1			
D574	8-719-105-99	DIODE RD6.2M-B1			
D575	8-719-978-69	DIODE DTZ-TT11-16B			
D576	8-719-988-62	DIODE 1SS355			
D577	8-719-988-62	DIODE 1SS355			
D578	8-719-988-62	DIODE 1SS355			
D630	8-719-914-43	DIODE DAN202K			
D631	8-719-056-83	DIODE UDZ-TE-17-6.8B			

Ref. No.	Part No.	Description			Remark
C81	1-126-163-11	ELECT	4.7uF	20%	50V
C82	1-126-160-11	ELECT	1uF	20%	50V
C83	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C84	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C85	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C86	1-124-257-00	ELECT	2.2uF	20%	50V
C88	1-126-157-11	ELECT	10uF	20%	16V
C90	1-136-155-00	FILM	0.015uF	5%	50V
C91	1-126-163-11	ELECT	4.7uF	20%	50V
C92	1-126-160-11	ELECT	1uF	20%	50V
C93	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C94	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C96	1-124-257-00	ELECT	2.2uF	20%	50V
C97	1-124-234-00	ELECT	22uF	20%	16V
C98	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C101	1-126-157-11	ELECT	10uF	20%	16V
C102	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C103	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C120	1-126-157-11	ELECT	10uF	20%	16V
C150	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C151	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C152	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C153	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C154	1-126-157-11	ELECT	10uF	20%	16V
C155	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C156	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C157	1-124-257-00	ELECT	2.2uF	20%	50V
C201	1-126-935-11	ELECT	470uF	20%	16V
C202	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C203	1-126-157-11	ELECT	10uF	20%	16V
C204	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C205	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C206	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C207	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C211	1-124-589-11	ELECT	47uF	20%	16V
C212	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C213	1-124-234-00	ELECT	22uF	20%	16V
C214	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C230	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C231	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C235	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C236	1-124-465-00	ELECT	0.47uF	20%	50V
C237	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C238	1-126-163-11	ELECT	4.7uF	20%	50V
C239	1-124-257-00	ELECT	2.2uF	20%	50V
C240	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C241	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C245	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C246	1-124-465-00	ELECT	0.47uF	20%	50V

Ref. No.	Part No.	Description			Remark
C247	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C248	1-126-163-11	ELECT	4.7uF	20%	50V
C249	1-124-257-00	ELECT	2.2uF	20%	50V
C250	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C251	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C252	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C253	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C255	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C271	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C272	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C273	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C281	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C282	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C283	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C300	1-124-257-00	ELECT	2.2uF	20%	50V
C301	1-136-165-00	FILM	0.1uF	5%	50V
C302	1-137-366-11	FILM	0.0022uF	5%	50V
C303	1-126-157-11	ELECT	10uF	20%	16V
C304	1-137-366-11	FILM	0.0022uF	5%	50V
C305	1-126-157-11	ELECT	10uF	20%	16V
C306	1-124-465-00	ELECT	0.47uF	20%	50V
C321	1-124-584-00	ELECT	100uF	20%	10V
C322	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C323	1-124-234-00	ELECT	22uF	20%	16V
C324	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C325	1-124-584-00	ELECT	100uF	20%	10V
C326	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C327	1-124-584-00	ELECT	100uF	20%	10V
C328	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C331	1-126-163-11	ELECT	4.7uF	20%	50V
C332	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C333	1-124-584-00	ELECT	100uF	20%	10V
C334	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C341	1-126-163-11	ELECT	4.7uF	20%	50V
C342	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C400	1-124-257-00	ELECT	2.2uF	20%	50V
C401	1-136-165-00	FILM	0.1uF	5%	50V
C402	1-137-366-11	FILM	0.0022uF	5%	50V
C403	1-126-157-11	ELECT	10uF	20%	16V
C404	1-137-366-11	FILM	0.0022uF	5%	50V
C405	1-126-157-11	ELECT	10uF	20%	16V
C406	1-124-465-00	ELECT	0.47uF	20%	50V
C411	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C431	1-126-163-11	ELECT	4.7uF	20%	50V
C432	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C441	1-126-163-11	ELECT	4.7uF	20%	50V
C442	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C501	1-126-157-11	ELECT	10uF	20%	16V
C502	1-163-031-11	CERAMIC CHIP	0.01uF		50V

Ref. No.	Part No.	Description	Remark
D640	8-719-914-43	DIODE DAN202K	
D641	8-719-056-84	DIODE UDZ-TE-17-7.5B	
D650	8-719-056-88	DIODE UDZ-TE-17-11B	
D651	8-719-914-44	DIODE DAP202K	
D652	8-719-056-88	DIODE UDZ-TE-17-11B	
D661	8-719-105-99	DIODE RD6.2M-B1	
D662	8-719-105-99	DIODE RD6.2M-B1	
D664	8-719-105-99	DIODE RD6.2M-B1	
D667	8-719-105-99	DIODE RD6.2M-B1	
D669	8-719-105-99	DIODE RD6.2M-B1	
D670	8-719-105-99	DIODE RD6.2M-B1	
D671	8-719-056-88	DIODE UDZ-TE-17-11B	
D672	8-719-105-99	DIODE RD6.2M-B1	
D673	8-719-105-99	DIODE RD6.2M-B1	
D680	8-719-988-62	DIODE 1SS355	
D682	8-719-105-99	DIODE RD6.2M-B1	
D683	8-719-105-99	DIODE RD6.2M-B1	
D705	8-719-048-98	DIODE RB160L-40TE25	
D901	8-719-049-38	DIODE 1N5404TU	
D905	8-719-988-62	DIODE 1SS355	
D911	8-719-105-99	DIODE RD6.2M-B1	
D912	8-719-105-99	DIODE RD6.2M-B1	
D915	8-719-988-62	DIODE 1SS355	
D916	8-719-976-87	DIODE DTZ3.9A	
D917	8-719-976-87	DIODE DTZ3.9A	
		< FUSE >	
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
		< IC >	
IC10	8-759-448-86	IC TB2114FN(EL)	
IC81	8-759-711-82	IC NJM4580E	
IC101	8-759-456-18	IC MN1884820Y5F	
IC150	8-759-065-98	IC SAA6579T	
IC201	8-759-823-87	IC LB1638M	
IC210	8-752-079-79	IC CXA2510AQ-T4	
IC301	8-752-078-67	IC CXA1946BQ-T6	
IC302	8-759-711-82	IC NJM4580E	
IC303	8-759-711-82	IC NJM4580E	
IC404	8-759-711-82	IC NJM4580E	
IC501	8-759-460-52	IC uPD78058GC-462-3B9	
IC551	8-759-363-81	IC XC61AN4002PR	
IC571	8-759-449-89	IC BA8270F-E2	
IC601	8-759-347-50	IC BA3918-V3	
IC701	8-759-448-61	IC HA13156	
		< JACK >	
J10	1-764-808-14	JACK (ANTENNA)	
J680	1-566-822-41	JACK (REMOTE IN)	

Ref. No.	Part No.	Description	Remark
		< JUMPER RESISTOR >	
JR2	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR3	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR4	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR8	1-216-296-00	CONDUCTOR, CHIP (3216)	
		< COIL >	
L10	1-410-196-11	INDUCTOR CHIP 2.2uH	
L11	1-410-196-11	INDUCTOR CHIP 2.2uH	
L25	1-410-204-31	INDUCTOR CHIP 10uH	
L26	1-410-204-31	INDUCTOR CHIP 10uH	
L101	1-410-204-31	INDUCTOR CHIP 10uH	
L102	1-410-204-31	INDUCTOR CHIP 10uH	
L501	1-410-204-31	INDUCTOR CHIP 10uH	
L901	1-411-669-12	COIL, CHOKE	
		< TRANSISTOR >	
Q10	8-729-106-68	TRANSISTOR 2SD1615A-GP	
Q11	8-729-106-68	TRANSISTOR 2SD1615A-GP	
Q70	8-729-920-21	TRANSISTOR DTC314TKH04	
Q80	8-729-920-21	TRANSISTOR DTC314TKH04	
Q85	8-729-921-25	TRANSISTOR FMC2	
Q90	8-729-920-21	TRANSISTOR DTC314TKH04	
Q101	8-729-429-92	TRANSISTOR XN1211	
Q102	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q103	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q110	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q111	8-729-900-53	TRANSISTOR DTC114EK	
Q201	8-729-030-18	TRANSISTOR 2SD2525	
Q202	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q203	8-729-106-60	TRANSISTOR 2SB1115A	
Q231	8-729-920-21	TRANSISTOR DTC314TKH04	
Q241	8-729-920-21	TRANSISTOR DTC314TKH04	
Q251	8-729-921-25	TRANSISTOR FMC2	
Q331	8-729-015-39	TRANSISTOR DTC323TK	
Q341	8-729-015-39	TRANSISTOR DTC323TK	
Q431	8-729-015-39	TRANSISTOR DTC323TK	
Q441	8-729-015-39	TRANSISTOR DTC323TK	
Q571	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q572	8-729-900-53	TRANSISTOR DTC114EK	
Q573	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q574	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q630	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q640	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q650	8-729-921-25	TRANSISTOR FMC2	
Q651	8-729-030-18	TRANSISTOR 2SD2525	
Q652	8-729-030-18	TRANSISTOR 2SD2525	
Q653	8-729-921-25	TRANSISTOR FMC2	

MAIN

Ref. No.	Part No.	Description	Remark
Q655	8-729-216-22	TRANSISTOR 2SA1162-G	
Q656	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q657	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q658	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q731	8-729-015-39	TRANSISTOR DTC323TK	
Q741	8-729-015-39	TRANSISTOR DTC323TK	
Q751	8-729-015-39	TRANSISTOR DTC323TK	
Q761	8-729-015-39	TRANSISTOR DTC323TK	
Q911	8-729-021-94	TRANSISTOR 2SK1657-T1B	
Q912	8-729-021-94	TRANSISTOR 2SK1657-T1B	
Q913	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q914	8-729-900-53	TRANSISTOR DTC114EK	
		< RESISTOR >	
R10	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R11	1-216-037-00	METAL CHIP 330 5% 1/10W	
R12	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R13	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R15	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R16	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R17	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R18	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R19	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R20	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R21	1-216-041-00	METAL CHIP 470 5% 1/10W	
R70	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R71	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R80	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R81	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R82	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R83	1-216-063-00	METAL CHIP 3.9K 5% 1/10W (AEP,UK)	
R83	1-216-073-00	METAL CHIP 10K 5% 1/10W (G)	
R84	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R85	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R86	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R87	1-216-045-00	METAL CHIP 680 5% 1/10W	
R90	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R91	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R92	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R93	1-216-063-00	METAL CHIP 3.9K 5% 1/10W (AEP,UK)	
R93	1-216-073-00	METAL CHIP 10K 5% 1/10W (G)	
R94	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R95	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R101	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R102	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R110	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R112	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R114	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R117	1-216-089-00	METAL GLAZE 47K 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R118	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R121	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R122	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R123	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R124	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R125	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R126	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R130	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R131	1-216-119-00	METAL CHIP 820K 5% 1/10W	
R150	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R151	1-216-129-00	METAL CHIP 2.2M 5% 1/10W	
R152	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R153	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R201	1-216-150-00	METAL GLAZE 10 5% 1/8W	
R202	1-216-150-00	METAL GLAZE 10 5% 1/8W	
R203	1-216-150-00	METAL GLAZE 10 5% 1/8W	
R204	1-216-150-00	METAL GLAZE 10 5% 1/8W	
R205	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R206	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R207	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R230	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R231	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R232	1-216-027-00	METAL CHIP 120 5% 1/10W	
R233	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R234	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R235	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R236	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R240	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R241	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R242	1-216-027-00	METAL CHIP 120 5% 1/10W	
R243	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R244	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R245	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R246	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R250	1-216-682-11	METAL CHIP 20K 0.5% 1/10W	
R251	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R252	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R253	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R261	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R301	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R303	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R304	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R305	1-216-295-00	CONDUCTOR, CHIP (2012)	
R306	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R311	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R312	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R321	1-216-214-00	METAL GLAZE 4.7K 5% 1/8W	
R322	1-216-214-00	METAL GLAZE 4.7K 5% 1/8W	
R331	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	

Ref. No.	Part No.	Description				Remark
R332	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R333	1-216-033-00	METAL CHIP	220	5%	1/10W	
R334	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R341	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R342	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R343	1-216-033-00	METAL CHIP	220	5%	1/10W	
R344	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R401	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R403	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R404	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R405	1-216-295-00	CONDUCTOR, CHIP		(2012)		
R406	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R411	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R412	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R431	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R432	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R433	1-216-033-00	METAL CHIP	220	5%	1/10W	
R434	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R441	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R442	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R443	1-216-033-00	METAL CHIP	220	5%	1/10W	
R444	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R501	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R505	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R506	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R507	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R508	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R509	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R510	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R511	1-216-037-00	METAL CHIP	330	5%	1/10W	
R512	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R513	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R514	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R515	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R520	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R521	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R522	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R523	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R525	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R527	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R530	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R551	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R552	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R560	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R571	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R572	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R573	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R574	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W	
R576	1-216-097-00	METAL GLAZE	100K	5%	1/10W	

Ref. No.	Part No.	Description				Remark
R577	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R578	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R630	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W	
R631	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R632	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R633	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R634	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R640	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W	
R643	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R644	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R650	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R651	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R655	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R656	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R657	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R658	1-216-675-11	METAL CHIP	10K	0.5%	1/10W	
R659	1-216-675-11	METAL CHIP	10K	0.5%	1/10W	
R661	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R662	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R664	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R667	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R669	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R670	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R671	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R672	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R673	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R675	1-216-699-11	METAL CHIP	100K	0.5%	1/10W	
R676	1-216-699-11	METAL CHIP	100K	0.5%	1/10W	
R680	1-216-675-11	METAL CHIP	10K	0.5%	1/10W	
R681	1-216-675-11	METAL CHIP	10K	0.5%	1/10W	
R682	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R683	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R701	1-216-134-00	METAL CHIP	2.2	5%	1/8W	
R702	1-216-134-00	METAL CHIP	2.2	5%	1/8W	
R703	1-216-134-00	METAL CHIP	2.2	5%	1/8W	
R704	1-216-134-00	METAL CHIP	2.2	5%	1/8W	
R705	1-216-134-00	METAL CHIP	2.2	5%	1/8W	
R706	1-216-134-00	METAL CHIP	2.2	5%	1/8W	
R707	1-216-134-00	METAL CHIP	2.2	5%	1/8W	
R708	1-216-134-00	METAL CHIP	2.2	5%	1/8W	
R715	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R731	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R732	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R741	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R742	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R751	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R752	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R761	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R762	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	

MAIN **SUB**

Ref. No.	Part No.	Description				Remark
R910	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R911	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R912	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R915	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R916	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R917	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R931	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R941	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
		< VARIABLE RESISTOR >				
RV110	1-238-861-11	RES, ADJ, CERMET 470K				
RV231	1-238-856-11	RES, ADJ, CERMET 10K				
RV241	1-238-856-11	RES, ADJ, CERMET 10K				
		< SWITCH >				
S501	1-571-478-11	SWITCH, SLIDE (POWER SELECT)				
S551	1-571-532-21	SWITCH, TACTILE (RESET)				
S560	1-762-108-11	SWITCH, PUSH (1 KEY) (NOSE DET)				
		< TUNER >				
TU10	A-3282-012-A	TUNER UNIT (TUX-006 (E))				
		< VIBRATOR >				
X10	1-577-126-51	VIBRATOR, CRYSTAL (7.2MHz)				
X101	1-579-952-21	VIBRATOR, CERAMIC (8MHz)				
X150	1-579-900-21	VIBRATOR, CRYSTAL (4.332MHz)				
X501	1-760-489-11	VIBRATOR, CERAMIC (5MHz)				
X502	1-760-928-21	VIBRATOR, CRYSTAL (32.67kHz)				
**********						
*	1-665-379-11	SUB BOARD				
		**********				
		< CONNECTOR >				
CN800	1-779-170-11	SOCKET, CONNECTOR 20P				
CN801	1-779-169-11	SOCKET, CONNECTOR 18P				
		< DIODE >				
D800	8-719-422-64	DIODE MA8062-M				
D801	8-719-422-64	DIODE MA8062-M				
D802	8-719-422-64	DIODE MA8062-M				
D803	8-719-422-64	DIODE MA8062-M				
LED800	8-719-058-14	LED CL-220PG-C-TS (⏏)				
		< SWITCH >				
LSW800	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (⏏)				

Ref. No.	Part No.	Description				Remark
		< TRANSISTOR >				
Q800	8-729-424-08	TRANSISTOR UN2111				
Q801	8-729-421-22	TRANSISTOR UN2211				
		< RESISTOR >				
R800	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R801	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R803	1-216-037-00	METAL CHIP	330	5%	1/10W	
R804	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R805	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R806	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R807	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
**********						
		MISCELLANEOUS				
		**********				
2	1-776-527-41	CORD (WITH CONNECTOR) (ISO) (POWER)				
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A				
HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)				
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)				
M902	A-3291-664-A	MOTOR ASSY, SUB (LOADING/TAPE OPERATION)				
S901	1-692-885-11	SWITCH, ROTARY SLIDE (TAPE OPERATION)				
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		ACCESSORIES & PACKING MATERIALS				
		**********				
	1-473-067-31	REMOTE COMMANDER (RM-X2S)				
	3-856-243-11	MANUAL (COMMANDER), FITTING (ENGLISH, FRENCH,GERMAN,SPANISH,DUTCH,SWEDISH, ITALIAN,PORTUGUESE,CHINESE)(RM-X2S)				
	3-859-378-11	MANUAL, INSTRUCTION (ENGLISH,SPANISH, SWEDISH,PORTUGUESE) (AEP,UK)				
	3-859-378-21	MANUAL, INSTRUCTION (FRENCH,GERMAN, DUTCH,ITALIAN) (AEP)				
	3-859-378-31	MANUAL, INSTRUCTION (GERMAN) (G)				
	3-859-379-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH,SWEDISH,PORTUGUESE) (AEP,UK)				
	3-859-379-21	MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN,DUTCH,ITALIAN) (AEP,G)				
	X-3373-386-1	CASE ASSY				
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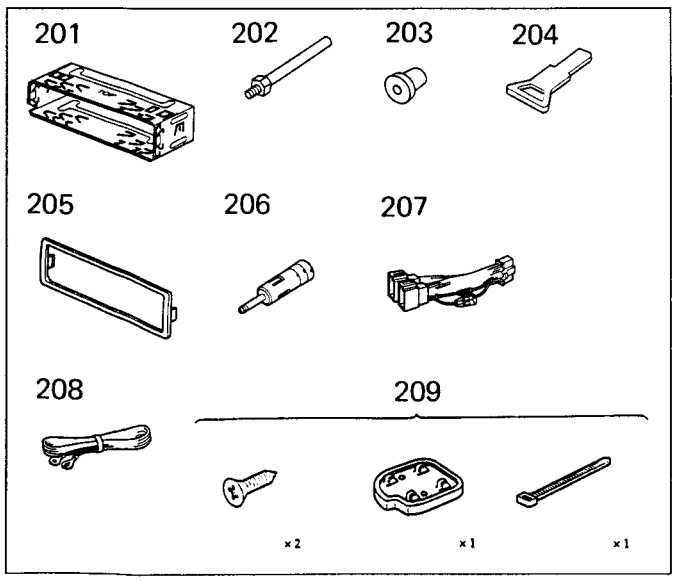
Ref. No.	Part No.	Description	Remark
		**********	
		HARDWARE LIST	
		**********	
#1	7-621-772-30	SCREW +B 2X6	
#2	7-621-255-15	SCREW +P 2X3	
#3	7-685-793-09	SCREW +PTT 2.6X8 (S)	
#4	7-628-253-00	SCREW +PS 2X4	
#5	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT	
#6	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3	
#7	7-624-104-04	STOP RING 2.0, TYPE -E	
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		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
201	3-011-653-11	FRAME	
202	3-386-828-01	SCREW, FITTING	
* 203	3-358-697-01	BUSHING	
204	3-909-731-01	KEY	
205	3-012-213-21	COLLAR	
206	1-465-459-11	ADAPTOR, ANTENNA	
207	1-776-527-41	CORD (WITH CONNECTOR) (ISO) (POWER)	
208	1-775-543-11	CORD, GROUND	
209	X-3369-817-1	BRACKET ASSY (RM-X2S)